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COASTAL COMMAND

By WING COMMANDER G. G. BARRETT, p.s.a., R.A.F.

On Wednesday, January 21st, 1942

AIR CHIEF MARSHAL SIR P. JOUBERT DE LA FERTÉ, K.C.B., C.M.G.,
D.S.O., Air Officer Commanding-in-Chief, Coastal Command, in
the Chair.

THE CHAIRMAN introduced the Lecturer.

LECTURE.

COASTAL Command is such an immensely wide subject that it is an impossible task to describe all its operations adequately in the space of one lecture. It is an unfailing source of interest because it differs so greatly from all other Commands. The titles of the other Commands indicate their function, but Coastal Command combines all those functions and some more of its own. It searches to-day, fights to-morrow, bombs the day after. It combines the keen eye of the look-out and the light-footed mobility of the fighter with the punch of the bomber. In no other Command has the Commander-in-Chief the opportunity to control all the pieces on the board in his match against the enemy. In Coastal Command he controls the whole variety of air forces. It is this versatility which makes the story of Coastal Command so engrossing and gives it that something which the others have not got.

HISTORICAL SURVEY

In 1920, under the Trenchard Memorandum on the reorganization of the Royal Air Force, there was formed a Command known as Coastal Area. It is from that foundation that the present Command has grown. In the first instance, Headquarters Coastal Area controlled all aircraft whose duty it was to operate over the sea. This included just the flying boat squadrons and ship-borne aircraft in Home waters. Its role was

primarily to co-operate in naval operations in waters within range of this island. At that time there was no idea of a naval threat to our shores or of an invasion. Only the U-boat attacks upon our shipping were foreseen, so that the role of Coastal Area was limited to coastal reconnaissance and anti-submarine operations. Its training was directed entirely to that end.

As the years went by there was very little change in policy regarding the role of Coastal Area, but there are some landmarks in its history which are worthy of mention :—

- (i) In 1936, when the Royal Air Force was reorganized on a functional basis, Coastal Area became Coastal Command.
- (ii) At about the same time, the improvement in the reliability of aircraft engines and in their performance led to the production of twin-engined landplanes which could fly on one engine. Because landplanes are cheaper to build and, if aerodromes are available, easier to operate than flying boats, a revolutionary change in policy was made and landplanes were supplied to Coastal Command for operations over the sea.
- (iii) In 1937 the Navy assumed responsibility for all ship-borne aircraft.

With the rather limited role of coastal reconnaissance in view and since the total number of aircraft available for all purposes was so very small, Coastal Command entered the War with only a small force. It had :—

5 Flying Boat Squadrons.
7 Anson Squadrons.
2 Vildebeest Squadrons.
 $\frac{1}{2}$ Hudson Squadron.

By far the greatest part of its equipment consisted of Ansons. This aircraft was already obsolescent, but replacements were not available and it had to be employed for active operations. The success which has attended the Anson throughout two years of war is adequate testimony to the workmanship and skill which was put into its design and manufacture.

ROLE IN THE PRESENT WAR

PHASE I

When, therefore, Coastal Command entered the War the full implication of its responsibilities had not been foreseen. I doubt whether it were possible even up to the last to foresee how large would be the burden which it would have to carry. For the first nine months it bore almost the whole brunt of the air war. During this time, Bomber

Command was largely occupied with dropping leaflets. Fighter Command had an occasional battle off the Scottish coast. But the work of Coastal Command went on unceasingly from the start. Within a few hours of the declaration of war, a Coastal Command Anson had opened the air offensive by attacking a U-boat, and on the first day the Chief of the Naval Staff asked that a Coastal Command pilot should be specially commended for a most valuable piece of reconnaissance work.

During this first phase which lasted until April, 1940, the main tasks of the Command were anti-submarine protection for ocean convoys, anti-submarine protection for coastal convoys, and a comprehensive system of North Sea sweeps to locate any surface raiders attempting to break out or enemy vessels trying to run for home. The extent of the task was very much greater than the aircraft of the Command could possibly accomplish. So serious was the shortage of equipment that it had to be made up by bluff. Tiger and Hornet Moths, completely unarmed, were flown on North Sea sweeps. These sweeps were known as the "Scarecrow" patrol. The light training type of aircraft flew over the North Sea in incredibly bad weather with an endurance of only about 2½ hours. The theory behind this sort of patrol was that at the first glimpse of an aircraft the U-boats would dive without waiting to argue about the aircraft's powers of attack. By diving, the U-boat lost the mobility of its surface speed and probably lost all view of surface events until the commander felt that the aircraft had departed. While the U-boat was submerged whole convoys could pass unmolested. The theory of the "Scarecrow" patrol worked excellently in practice and the Moths armed only with bluff undoubtedly saved many thousands of tons of merchant shipping. As evidence of these successes, one Tiger Moth reported finding in the water an unidentified whitish matter and a bucket partly filled with dirty water floating near it. This was interpreted to be the abandoned relics of a German sailor's ablutions, brought to an untimely end by a crash dive.

PHASE 2.

The second phase in Coastal Command operations was the period of April and May, 1940, during which the Germans invaded Denmark and Norway. This invasion greatly increased the load on the Command because, while the anti-submarine operations of the previous phase continued, it now became necessary to provide air escort to our warships and to the convoys supplying our Norwegian campaign. The German occupation of Norway enabled the enemy to use aerodromes along the Norwegian coast. This meant not only air attack on warships and convoys, but also an intensified air opposition to our North Sea sweeps. In addition, air attacks upon our coastal convoys now became an ominous

threat. Fortunately at this time the first long-range fighter squadrons in the Command were just coming to readiness, and they began their career with some fine work during this period.

No survey of this phase would be complete without some reference to the ferry work performed by Sunderlands of the Command. They carried a large number of people and quantities of stores between this country and the Norwegian coast, frequently entering strange waters and on occasion having to fight their way out again. It was while engaged on this ferry duty that two of the famous fleet of Empire boats, "Cabot" and "Caribou," were lost.

PHASE 3

Coastal operations passed into a third phase in June, 1940, when the enemy invaded the Low Countries. With the exception of actual operations in Norway, all the work of the previous phases went on. But as the German armies swept on towards the French coasts other tasks were added to the already extensive duties of Coastal Command. Aircraft of all types were taken off their role of general reconnaissance and were formed into a powerful striking force. This force was directed first against Stavanger and Bergen, then against enemy shipping in the Fjords and against enemy aerodromes in Norway and Denmark.

As the enemy came on farther South and West, Coastal aircraft of all types excluding, of course, flying boats, were drawn into the battle over the Dutch and Belgian coasts and over the Channel. The tempo of the War became faster and more furious, leading up to the air protection of Dunkirk in which Coastal Command adopted almost an Army Co-operation role.

These high pressure operations eventually tailed off into protection for the evacuation of the Channel Islands.

PHASE 4

Operations now passed into a fourth phase in which the dominating factor was the German occupation of France. This had a far-reaching effect upon the tasks of the Command. For one thing it allowed U-boats to use bases on the French Atlantic coast, and from this time on the Command's own particular war, namely, the Battle of the Atlantic, entered upon its most difficult period. The Channel approaches became too dangerous by virtue of their closeness to the French coast, and our convoys had to be switched from the western to the north-western approaches. At the same time, it became necessary to increase the strength of the long-range fighter squadrons to meet the increased threat of air attack upon our coastal convoys outside the range of Fighter Command's single-engined fighters.

However, a further change during this period was due to the threat of invasion. The routine North Sea reconnaissances were reorganized into a series of anti-invasion patrols designed to locate any attempt by the enemy to send sea-borne forces to this country. At the same time some of Coastal Command's bomb-carrying aircraft were able to supplement Bomber Command's attacks on the ports from which an invasion might be launched and the aerodromes at which the bombardment, which was perhaps a preliminary to an invasion, was being prepared. In this phase photographic reconnaissance played an increasingly important part and became yet another task for Coastal Command to undertake.

PHASE 5

The fifth phase of operations began in January, 1941, and still continues. Its chief difference from the previous phase was the increasing threat to our ocean convoys, not only from U-boats but from aircraft. The advantages of the occupation of the Atlantic seaboard of Europe were quickly exploited by the enemy, who brought up the Focke-Wulf bombers which began to operate from both France and Norway. The Focke-Wulf's enormous range enabled them to go out to our convoys at distances which were almost up to the limit at which we could provide air escort. At these great distances our only aircraft were flying boats which were very much slower than the Focke-Wulf, hence our aircraft although more heavily armed were at a serious tactical disadvantage in that they could never be offensive; the initiative always lay with the enemy. Nevertheless, they performed some remarkable feats in keeping Focke-Wulfs away from convoys and even on occasion persuading the Focke-Wulf to attack our own aircraft, on which occasion the Focke-Wulf always suffered most.

Quite apart from the threat of the Focke-Wulfs to convoys as a bomber, and it was a very serious threat, they were also employed to lead U-boats to the convoys. The Focke-Wulf would locate the convoy and shadow it, meantime reporting its position, course and speed to enemy submarines in the area, so that the U-boats, using their high surface speed, could approach and attack during the hours of darkness.

While the Focke-Wulfs and the U-boats were stirring up trouble in the West, the threat of invasion from the East gradually diminished. As Bomber Command's strength grew to more formidable proportions it became less necessary for Coastal Command aircraft to attack inland targets, and they were able to confine themselves to coastal targets and shipping. The efforts of Bomber Command were producing ever increasing dislocation of the continental railways, with the result that the Germans were forced to send more and more supplies by coastal convoy. These convoys have become special targets for

Coastal aircraft along the whole western coast of Europe, and you will have read in the Press of the effectiveness of these attacks. In the autumn months of 1941 some of the northbound convoys round the coast of Norway have been carrying supplies to the northern front. The very successful attacks made by Coastal Command aircraft upon these convoys have been an important contribution towards our aid to Russia.

Glancing back over this brief survey of operations, the really astonishing feature is the changes which have occurred in the role of the Command in two years of war. The role begins with general reconnaissance, changes to include first fighting and then bombing early in 1940, swings almost to army co-operation at the time of Dunkirk, moves back to anti-invasion bombing, and is now almost back to the original reconnaissance role. You can see now why in my opening remarks I said that Coastal Command has a versatility which gave it something the other Commands had not got.

COASTAL COMMAND AIRCRAFT

I said earlier that at the beginning of the War Coastal Command had insufficient aircraft to fulfil even its original limited role. We have seen how its role has changed and grown, so it is not surprising that there have been equally great changes and increases in equipment and aircraft.

Flying Boats.—In the realm of flying boats the London and Stranraer, both medium-range twin-engined boats, have been turned over to training. The Sunderland, which as you will remember is the military version of the famous four-engined Empire boats and which was fairly new at the outbreak of war, has now been improved. It is without doubt the best medium-range flying boat in existence. It combines comfort with a reasonable bomb load and a heavy defensive armament. It is a grand tribute to Short Brothers who designed it and to British construction. Unfortunately our Sunderland output could not compete with our requirements, and in the Spring of 1941 we were delighted to see the Consolidated P.B.Y.5, now called "Catalina," arriving in this country from America. This boat has an enormous range for its size and carries a very useful bomb load. It is beautifully built, very tough, easy to fly, easy to maintain and keeps on going for ever. I can say from personal experience that it is a really remarkable aeroplane.

Landplanes.—As far as landplanes are concerned, the replacement of Ansons with Lockheed Hudsons went on steadily from the start. There is no end to the history of wonderful feats performed by these Hudson aircraft. To assist the Hudsons and the flying boats in their ever in-

creasing reconnaissance tasks, squadrons of Wellingtons and Whitleys were formed. Although both these types were designed as bombers they have performed great service over the Atlantic. The latest addition to this varied fleet is the Consolidated "Liberator," whose high speed, long range, heavy armament and bomb load should prove a nasty thorn in the U-boat's side.

While all these aircraft have at some time or other been used as a striking force, the recognised punch of the Command lies in the torpedo bomber squadrons. The Bristol Beaufort has now replaced the Vildebeest and you read daily of the feats performed by these aircraft against enemy ships.

In the first instance the fighters were Blenheims specially modified for the purpose. These did some excellent work but were hardly fast enough. They have now been replaced by the Beaufighter, which is proving to be just the thing required for long-range convoy protection.

Here I must pay a tribute to American aircraft, and there is no more suitable place for me to do so than this Institution where members of all Services meet to discuss military affairs. Coastal Command has more American aircraft than any other Command and has had, therefore, the best opportunity to appreciate their quality. I can speak from personal experience of their fine flying characteristics and the excellent workmanship which has gone into their making, and I should like to place on record our gratitude to the people of the United States for their labour, our appreciation of their skill and our admiration for the aircraft which they have sent us.

ORGANIZATION

I cannot say very much about the organization which controls all these different types of aircraft and enables them to perform the varied roles which have been described; the basic principle, the predominating factor in the organization is close co-operation with the Navy. The whole Command has been organized to implement this policy. At Headquarters there is a body of naval officers charged with maintaining liaison between the Air Staff at Coastal Command and the Admiralty. Similarly at the Admiralty there are Air Force officers charged with maintaining liaison between the Admiralty and Coastal Command.

The actual control of operational squadrons is vested in the Groups. These are formed on a geographical basis to conform to the naval geographical areas. Group Headquarters is, in fact, part of a combined area headquarters, where the Naval Commander-in-Chief and the R.A.F. Air Officer Commanding have adjoining offices and where every operation is arranged by a combined Naval and R.A.F. Staff. Final executive

orders are sent by the Group to the Stations from which the aircraft are despatched.

Experience has shown that this form of co-operative organization is a very happy one and is, therefore, very efficient.

PRESENT OPERATIONS

AIR ESCORT

At present this organization is concerned primarily with providing air escort for our convoys. The majority of the effort goes into the protection of ocean convoys, because the protection of coastal convoys is part of the normal defence of these Islands and therefore falls, in part at any rate, to Fighter Command. By far the greater part of air escort is anti-submarine, its object being to sight and sink U-boats, or at any rate to force them to dive so that convoys can pass safely. Side by side with anti-submarine escort goes anti-aircraft escort, the object of which is to prevent enemy aircraft from attacking our ships. On occasion anti-submarine and anti-aircraft escorts are combined. Both these forms of escort necessitate keeping an aircraft either over the convoy, or within a relatively small area around it, for the whole period during which it is passing through waters within the threat of U-boat or air attack. Coastal Command has been continuously employed at this sort of work ever since the War began. This form of escort has been most successful, but it is a great strain on personnel and aircraft alike. It is a very wearing form of flying. An 18-hour flight involving six dark and frequently dirty hours out to the convoy, six hours searching around it, and yet another six hours home through much more filthy weather is every bit as wearing as the longest raid into Germany. In fact, it is much more difficult to maintain efficiency and watchfulness with only the sea and clouds to look at than it is when enemy *flak* and fighters are around to keep you wide awake. It is harder to keep up to concert pitch when the moments of excitement are few and far between.

The fact that encounters with the enemy are rare does not mean that this form of escort is unprofitable. There is plenty of evidence to show that the very presence of aircraft has kept off many unseen threats and preserved many thousands of tons of shipping.

There is another side to this escort flying which I do not think we fully appreciate. I learned of it from a letter which was passed to me by the Naval Officer-in-Charge of a Scottish port. It was a letter from the Captain of a merchant ship. He asked the N.O.I.C. to pass on to the crews of the flying boats operating in the area the gratitude both of himself and his crew for the services they gave. He expressed his admiration for the way in which the aircraft found the convoys in mid-Atlantic, and above all he wished to thank them for the feeling of security

which their presence gave him. After weeks at sea, every moment tense with the expectation of sudden attack, the arrival of the first flying boat over the convoy brought a feeling of great relief. From then on the whole crew lost its sense of strain, and all on board slept peacefully at night; they felt they were home. For ever after this, whenever the difficult decision had to be made "to fly or not to fly," I could not help thinking of all the men in all the ships far out at sea who were waiting hopefully for the aircraft to appear so that they might rest more peacefully. If one patrol gave one hour's rest to the crew of one ship, I think you will agree it was worth it.

In addition to their primary function of protection, escorting aircraft are frequently of great service to the Commodore of the convoy. They act as sheep dogs, collecting the stragglers, finding ships and escort vessels which have not joined up. They act as a post office for messages home, so that if the Commodore wishes to preserve wireless silence he can pass his signals to the aircraft visually and the aircraft passes them on when it reaches the base.

The history of air escort contains many examples of excitement and interest. When the submarine "Triad" was damaged off the Norwegian coast in November, 1939, Coastal Command aircraft escorted her home. When H.M.S. "Kelly" was torpedoed in the North Sea in May, 1940, forty-three Coastal Command aircraft took part in escort operations covering three days. At least seven enemy aircraft and a U-boat were driven off by the air escort.

By far the most unexpected result of any patrol was the capture of a U-boat by an aircraft. This is the first time that such a thing has ever happened in history. On 27th August, 1941, a Coastal Command Hudson, while on an anti-submarine patrol from Iceland, sighted a U-boat on the surface and dived to attack it. The U-boat, seeing its danger, crash-dived immediately. The Hudson dropped depth charges and the resulting explosions blew the U-boat to the surface again. To the amazement of the aircraft's crew the conning tower hatch opened and a number of men poured out on to the U-boat's deck. The Hudson at once attacked them with machine-gun fire, and they scrambled back into the conning tower. The Hudson continued to attack from a very low level, circling each time to bring the front guns to bear, while the rear gunner kept up an almost continuous fire. After the fourth attack the Germans in the conning tower waved a white shirt as a token of surrender. The Hudson ceased fire, but continued to circle the U-boat with all guns trained. To emphasize their determination to surrender the Germans then waved some sort of white board. The Hudson continued to circle the U-boat for the next three and a half hours, diving

low now and then. The U-boat crew no doubt feared that if they attempted an escape they would be depth-charged again.

While circling the U-boat the Hudson sent urgent messages back to Iceland asking for air relief and for surface vessels to take over the U-boat. A complicated but nevertheless most successful piece of organization was put into effect, and soon all nearby aircraft were diverted to the area. The first relief aircraft to arrive was a Catalina. The Hudson crew, anxious lest the new arrival should bomb the U-boat, flew towards the Catalina signalling by Aldis lamp "Look after 'our' repeat 'our' sub., which has shown the white flag." The Catalina signalled "O.K." and took over the job of air gaoler. During the day relays of other aircraft arrived to impress the U-boat with the air strength on hand, and the Catalina continued to circle hour after hour. The U-boat crew remained huddled in the conning tower, drenched by the rough seas that broke over her. Sometimes one or two of them stretched their legs on the deck but made no attempt to escape. As evening drew on it appeared doubtful whether surface vessels could reach the spot before nightfall, and, if they did not, it was even more doubtful whether aircraft could hold the U-boat during the night. However, just as light was failing the first naval vessel appeared on the horizon. The Catalina led her to the U-boat, but the sea was much too rough for boarding to be attempted. All through the night the Catalina made great efforts to keep in touch, and managed to do so periodically in spite of a full gale. At daybreak the U-boat and naval vessels were still in contact and more naval vessels had arrived. The Navy did a fine job of work managing at last to get a prize crew aboard and taking the German crew off. Before they could do so they had to resort to armed threats to prevent the Germans scuttling. For the forty hours between the arrival of the first surface vessel and the U-boat's reaching land flying the White Ensign, Coastal Command gave continuous air escort.

SEARCHES AND SWEEPS

The anti-submarine escort is, of course, a purely defensive form of operation designed to keep the enemy away from our ships. The offensive form of this type of operation is the anti-submarine sweep in which a given area is thoroughly searched by one or many aircraft. It is designed to find the enemy with a view to destroying him. The search may be made in support of surface movements or it may be made without reference to our own shipping. It may be based on definite information of enemy movements or it may be just a gamble. In spite of the slender chances of sighting any of the small number of U-boats in the vast expanse of the Atlantic, anti-submarine sweeps have been most successful. One series of sweeps produced seven U-boat sightings in one day.

Similar sweeps are also made for enemy surface craft, missing ships, missing aircraft, or for the survivors of torpedoed vessels.

One of the earliest examples of a search was that made for the "Deutschland" in December, 1939. As a search it was inconclusive because she was never found, but some admirable flying was done in very bad weather. Shortly afterwards came the hunt for the "Altmark." In February, 1940, it was known that this notorious German prison ship was steaming South past Bergen with 400 British prisoners on board. Three Hudsons found the ship during the morning of 16th February. This location enabled the Navy to drive her into Josing Fjord, and that night H.M.S. "Cossack" entered the Fjord and took off the prisoners. Coastal Command gave the "Cossack" air escort on the return journey and one of the aircraft just saved her from running into four mines.

By far the most important series of searches ever undertaken were those made for the "Bismarck." This operation is a text-book example of the employment of shore-based aircraft in support of naval operations. It was Coastal Command aircraft which first located the battleship in Bergen harbour. Bombing forces of Coastal Command were at once sent out to attack. Day after day attempts were made to get at the ship, but every time our aircraft were defeated by the weather. As the weather deteriorated still more it was thought that the battleship would try to break out, and so reconnaissance was renewed with even greater effort. Its departure was discovered by an aircraft in spite of appalling weather. It was feared that the "Bismarck" and "Prinz Eugen" would attempt to attack our shipping, so at dawn on 23rd May, 1941, aircraft from Iceland began a series of patrols to cover the Denmark Straits and the approaches to the North Atlantic between Iceland and the Hebrides. Weather throughout the day was very bad, some of the patrols had to be abandoned, and nothing whatever was seen of the enemy. On the evening of that day a British cruiser—H.M.S. "Norfolk"—reported the enemy ships in the Denmark Strait, West of Cape Horn. Before dawn the next morning aircraft from Iceland were sent out and a Hudson and a Sunderland located the enemy ships which had already been engaged by H.M.S. "King George V" and H.M.S. "Hood." The view which these aircraft had of the battle was very restricted owing to low cloud and bad visibility, but the Hudson did see the "Hood" hit and the Sunderland was able to locate the survivors and report their position so that other ships could go to their rescue. A Catalina then came out to take over the shadowing of the enemy, but this aircraft had to return and contact was lost. Throughout 25th May the whereabouts of the enemy was unknown. Extensive patrols were flown by aircraft of the Command, covering the approaches to Iceland, the Shetlands passage

and the French ports. At 10.30 a.m. on 26th May a Catalina sighted the "Bismarck" 600 miles West of Lands End. This enabled our surface forces to make contact with the enemy, and the "Bismarck" was sunk at 11 a.m. the following day.

A search with a rather different object was made for the survivors of the "Arandora Star." This was in July, 1940, and a Sunderland was instrumental in saving the lives of about 850 people; they were mostly enemy aliens. The liner was torpedoed by a German U-boat while on her way to Canada. Thirteen lifeboats and scores of rafts and survivors clinging to wreckage scattered over a wide area were discovered by a Sunderland. The crew of the flying boat tied their first-aid outfits to their life-saving jackets and dropped them to the women and children in the lifeboats and on the rafts. Two hours later the Sunderland sighted a Canadian destroyer and brought it up to the drifting survivors, and for three hours guided the destroyer's boats to various rafts and pieces of wreckage. All the survivors were thus picked up.

ROUTINE PATROLS

A similar but nevertheless different form of activity is the routine patrol. This is the sort of patrol used to close routes, channels or areas to enemy vessels. I have already alluded to the patrols flown over the North Sea during the early stages of the War to keep enemy shipping in or to catch ships which were out and prevent their return to German ports. The "Scarecrow" patrol is an example of this sort of thing, and the patrols which were flown to try to find the "Bismarck" in the first instance were of the same nature. The term "routine patrol" does not mean that they are flown day in and day out like a train service. It would be too easy for the enemy to discover the timing and find a loophole. Routine patrols are undertaken only when information regarding enemy movements indicates that they are necessary, as for example the anti-invasion patrols which were started when concentrations of barges and shipping indicated that an invasion of this Island was at least contemplated.

COASTAL RECONNAISSANCE

One of Coastal Command's most important duties is to maintain a watch over the whole of the coastline occupied by the enemy. Only in this way is it possible to observe the movements of enemy vessels and estimate the threat either to our own shipping or to this Island itself. Every day Coastal aircraft fight their way over enemy harbours and anchorages and come home full of holes but with valuable news and photographs. Many good crews have not returned from these attempts to get vital information. In this role of reconnaissance many

flights have been made which are epics in the realm of aviation. On one occasion a Sunderland was so damaged that the greater part of its petrol ran into the bilge. Nevertheless, it was brought home with the aid of a pump and a wireless operator in the wing to keep petrol in the tank.

The first really long-distance reconnaissance was a complete survey of the coast of Iceland by our first Catalina, involving a flight of something over two thousand miles. Another great flight was a reconnaissance of the Norwegian coast beginning at North Cape and stretching 700 miles southward. The captain of this aircraft was told that he would not be expected to go into any of the harbours without cloud cover, but the weather let him down and was almost cloudless. Nevertheless he did the job by rushing in and out among the mountains just above the water and took the defences so entirely by surprise that they did not get anywhere near him.

STRIKING FORCE

While reconnaissance is undoubtedly the primary role of Coastal Command, it was appreciated that some form of shore-based striking force would be necessary to work with shore-based reconnaissance aircraft. It was intended that the torpedo should be the main offensive weapon, but the advantages of bombs against lightly armoured ships were quickly apparent. The bomb is cheaper to make and does not need a special aircraft to carry it. More important, the use of bombs allows aircraft which are used for reconnaissance to-day to become part of a striking force to-morrow. In fact, much of the offensive action undertaken by Coastal Command has been by reconnaissance aircraft transformed for the moment into bombers.

There is no need for me to give you details of the offensive action taken every day by Coastal Command aircraft. The Press is full of reports of attacks on enemy ships, on convoys and of the bombing of invasion ports. There are, however, some operations which stand out. The "Scharnhorst" has been a favourite target for Coastal Command aircraft. She was attacked and badly damaged by Beauforts and Hudsons off Norway in June, 1940. In 1941 she lay with the "Gneisenau" in Brest. Coastal Command made the first attacks here, but later Bomber Command carrying heavier weight took over. It was against one of these ships that the most daring torpedo attack of the War was made. As dawn was breaking a single Beaufort dashed into Brest Harbour, skimmed it at a height of some 30 feet in intensive anti-aircraft fire, lifted itself over the mole protecting the battle cruisers and dropped its torpedo. At that moment the guns of the warship herself and some more shore batteries came into action. The Beaufort

faced what is probably the heaviest concentration of fire ever directed at a single aircraft at such short range. It is believed that the torpedo scored a direct hit, but the aircraft was shot down and the crew of four were all killed.

One of the most successful torpedo attacks was that on the "Lutzow"—the former "Deutschland." She attempted to break out into the Atlantic for surface raiding during June, 1941. She was attacked by Beauforts which scored two hits with torpedoes. This forced her to go back to her base and certainly thwarted her design of breaking out as a raider.

FIGHTING

It is natural that Coastal Command should go in for bombing. But a fighting role is perhaps less to be expected except in so far as reconnaissance aircraft must nearly always fight for their information. The provision of an escort as defence against enemy aircraft is a recent development of Coastal Command responsibility. In this connection there have been some remarkable battles, especially between flying boats and the faster and more heavily-armed Focke-Wulfs. The most intensive fighting ever undertaken by Coastal Command was during the evacuation from Dunkirk. Many of the aircraft which the Army saw above them at Dunkirk itself and over the Channel were reconnaissance aircraft of Coastal Command hastily turned over to the job of fighters. The majority were Hudsons and Ansons, while Swordfish and Albacores of the Fleet Air Arm, operating under Coastal Command, turned themselves into Army Co-operation squadrons and dive-bombed enemy tanks and armoured columns in the Dunkirk hinterland.

The amazing stories of the feats achieved by the Ansons and Hudsons are too numerous even to summarize. It was quite usual for three of them to tackle as many as forty German aircraft over the Dunkirk beaches, shooting some down and driving the others away. A typical story was that of some Albacores which had been operating against troop columns in France and were returning to their base with their ammunition exhausted. They were attacked by fifteen German aircraft, and two Albacores had already been shot down when three Hudsons arrived. The Hudsons drew the whole attack on themselves enabling the rest of the Albacores to get home safely. Flying close to the sea in tight formation, the Hudsons shot down without loss to themselves two of the enemy and probably a third and drove the rest away.

RESCUE

No catalogue of Coastal Command activities would be complete without a mention of its work of rescue. But quite apart from the

organized Air Sea Rescue system, Coastal Command flying boats have saved very many lives. You will remember the sinking of the "Kensington Court," when two Sunderlands picked up the survivors. Quite recently a Sunderland rescued the crew of a bomber who were found miles from land in a rubber dinghy. Unhappily, it is not an easy matter to get a flying boat down in the open sea and off again, or there would be many more such rescues. Often when a lifeboat is sighted it would be suicide to attempt to go down; or even if a landing were possible, a take-off would be out of the question. So, as often as not the flying boat can only report the position to its base, and drop food, water, cigarettes and signal cartridges, and then go off to find the nearest surface vessel.

TRAINING

The men who fly these Coastal Command aircraft are just the same as the men who fly in other Commands. They go through the same normal machinery of air crew training, but Coastal Command has schools of its own known as Schools of General Reconnaissance. These schools are primarily navigation schools, but other subjects such as ship recognition, patrol and search and signals are also taught. There is no doubt that the success achieved by Coastal Command is largely due to the work of these schools. The standard of navigation is very high. Convoys, even isolated ships, are picked up at great distances. Only recently a convoy was found 700 miles from land in a visibility of 500 yards. In fact, the visibility was so bad that the captain came home because he was afraid of colliding with the ships. This sort of performance is evidence of the sound training behind Coastal Command operations. The training must of necessity be of the best, because in the normal run of things emergencies do not often arise but when they do they are vital. Most crews never see an enemy battle fleet, but if they do their work must be perfect; on their reports whole fleets may be moved and whole air armadas despatched; the whole success of the operations, conceivably the result of a war, may hang on the quality of their work. In no other sphere of warfare does so much depend upon the efforts of so small a unit or such junior officers. No effort expended in their training is ever wasted.

COMMUNICATIONS

No matter how good the men, how good the aircraft, or how perfect the organization, no system of reconnaissance can operate without its system of communication. The finest flight is useless if the information it obtains cannot be sent back, so in Coastal Command more than in any other Command signals of all sorts are of vital importance. Here again I would pay tribute to the excellence of American equipment. Nothing can compare with the sense of security given by strong clear signals

from home when one is hundreds of miles out over the sea, and as a squadron commander I drew great comfort from the fact that in the worst weather or on the darkest night I was in immediate and direct touch with all my aircraft. We owe many lives and many aircraft to the skill and workmanship which our friends in the United States put into their wireless equipment.

The mention of weather leads me to a word about Coastal Command's meteorological service. The meteorological officers have an exceedingly difficult job forecasting conditions in mid-Atlantic with very little information to go on. Nevertheless, they have applied themselves to the task with industry and skill and have won the confidence of all who fly. It is with their aid that much wasteful flying is avoided and the safety of aircraft is preserved.

CO-OPERATION WITH THE ROYAL AND MERCHANT NAVIES

All this vast and varied activity is directed towards keeping our sea-borne lifelines open. I have explained how liaison is maintained between the R.A.F. and Naval Staffs. But this co-operation goes much further than that. Whenever possible, R.A.F. officers attend convoy conferences, where they are able to meet the men who sail the ships which they protect. All sorts of arrangements have been made so that the men of each Service can see how the other one works. Crews of Coastal Command aircraft go to sea in escort vessels. Officers from H.M. ships come and fly in our aircraft. This sort of thing has done much to help operations to go with a swing.

Between them the two Services have a lot of fun. Navigation is a perpetual sort of amusement, and on this subject ships and aircraft have many friendly arguments in mid-ocean. When a ship, after fourteen days at sea, meets an aircraft 800 miles from home, one of them is bound to ask the other: "Where am I?" The reply is a position which invariably produces the retort "Says you," or "That's what you think," and then the argument is on.

Occasionally the co-operation goes to the extent of fishing each other out of the water; even this has its lighter side. On one occasion an Anson was so badly damaged that it had to put down in the Channel. It chose a spot just beside a destroyer, and then signalled to the destroyer that it was sinking and the crew asked to be picked up. The destroyer signalled back that she had been sinking herself for the last half hour and soon her crew were pouring over the side. Fortunately another Anson directed a second destroyer to the spot and both the aircraft crew and the destroyer's crew were all picked up safely.

An extraordinary piece of co-operation took place when the captain of a destroyer was flying in a Catalina. The aircraft had been out to find a convoy, but when it reached the area the visibility was so bad that the captain of the aircraft decided to return. He climbed above the fog into the sunshine and set course for home. After some time the naval officer, who was in the second pilot's seat, leaned over and said: "If I were a U-boat commander I'd be on the surface to-day and you useless fellows could do nothing about it." The captain of the aircraft refused to be baited and merely agreed. However, the naval officer would not lie down and said: "I'll bet you five shillings there is a U-boat right ahead of us." Now five shillings is five shillings to the impecunious Air Force, even if it is one chance in millions, so the captain of the boat closed the throttle and went down. The water was sighted at about 100 feet in visibility of about 300 yards, and there was a U-boat right ahead! The captain let everything go and the rear gunner saw the depth charges fall around the U-boat before it was lost to sight. Nothing more was ever seen or found, but no one ever paid up with greater pleasure than the captain of that aircraft.

CONCLUSION

Now let me cast an eye back over the whole panorama of Coastal Command's activities. For more than two years of war it has kept watch over more than 60,000 square miles of ocean stretching from North Cape to West Africa. Its aircraft have flown over fifty million miles. They have given air escort to over 8,200 ocean convoys, involving 31,000 operational sorties on this task alone. Seven hundred and sixty attacks have been made against enemy naval units or supply ships, and the tonnage sunk or damaged beyond repair exceeds 300,000. Over three hundred attacks have been made on U-boats, and of the enemy aircraft which attempted to molest convoys, 75 have been destroyed and over 500 driven off. I feel sure that you will agree that this is a record of which we can be justly proud, and when these dark days are over and out of horror and suffering have come freedom from the threat of servitude and the downfall of the Nazi cult of tyranny, the services rendered during these terrible years by Coastal Command will fill a worthy page in our history.

DISCUSSION

A MEMBER: Could the Lecturer tell us a little about the training of Observers?

THE LECTURER: Observers are carried and are specially trained. After completing the normal course of observer training they receive additional instruction in reconnaissance, signals, patrol and search and, in fact, everything but the pure mechanics of handling the aircraft. In the ordinary course of events the Observer does the greater part of the navigation, but is relieved occasionally for meals and

rest by one of the pilots. They are in fact the ship's navigator, but the pilots are also trained in navigation so that they may be, in fact, captains of aircraft. I have already mentioned the special school—The School of General Reconnaissance—which gives training in great detail in all these aspects of flying operations which are peculiar to Coastal Command, so that if a vital emergency should arise the men on the spot know exactly how to deal with it.

THE CHAIRMAN

The Lecturer has been extremely kind to my Command. He is right when he says that the Coastal Command has a versatile and most interesting role to play. At various times in a somewhat chequered career I have had different forms of command—a mixed force, a fighter force, reconnaissance and so on; but I never realized until I went to Coastal Command what an interesting job an aircraft command can be. There is always something doing in Coastal for the whole twenty-four hours round the clock. It is rather wearing on the man in charge. He does not have very much time off, but has always some anxiety or other—a convoy is in trouble, there is a tricky piece of reconnaissance, an important photograph to be taken or a coastal objective to attack.

The Bomber Command have a straightforward task to do and with fairly settled hours; Fighter Command have a routine organization operating solely for one purpose; but Coastal Command is faced at any moment of the day with a new problem, and that is what makes it an extraordinary, and I might almost say, a very amusing Command. I would recommend any young Air Force officer who wants an interesting time to join Coastal in preference to any other.

The customary votes of thanks to the Chairman and Lecturer were carried by acclamation.

TRENCH GASCOIGNE PRIZE ESSAY, 1941

By LIEUT.-COLONEL J. H. WHALLEY-KELLY, *p.s.c.*†, The South Lancashire Regiment.

SUBJECT

"The war has demonstrated the remarkable effectiveness and versatility of air power in support of naval and military operations and also against the enemy's industries. What can be learnt from this in respect of the future organization of the three fighting Services?"

INTRODUCTION

THE object of this paper is to discuss what can be learnt regarding the future organization of the three fighting Services in the light of the proved effectiveness of air power in support of all operations and against the enemy's industries. The terms of reference do not specify whether the future organization referred to is that of the post-war period or one which should be evolved as the War progresses, *i.e.*, in the immediate future. As it is not possible at this stage to forecast conditions after the War, the writer proposes to confine himself to the immediate future, if only because invention and scientific progress do not stand still.

The war of 1914-18 saw the birth of a separate Air Force. When peace was declared, air power, as we know it now, was in its infancy and its great potentialities remained the subject of theory rather than practical experience. Nevertheless, post-war re-organization caused prolonged controversy as to the advisability of retaining the R.A.F. as a separate Service. At one time, this controversy almost caused a political crisis, but it is now old history that, after several debates in both Houses, no change was made. Later, the Admiralty returned to the charge and, after a good deal of discussion, the Fleet Air Arm was created. This gave the Royal Navy undivided control over air operations which were purely naval in their inception and scope. The Army, however, was not given an independent Army Wing.

The problem of the best organization of air power in relation to scientific development and consequent increase in striking power and versatility of application was not peculiar to the British Empire. All the Great Powers were faced with the same difficulty, but only the

United States and Japan retained purely military and naval wings: neither of these Powers have an independent air force. The pros and cons which affect the theoretical aspect of the problem appear to require examination before discussing the deductions to be made from the lessons of the present war. This examination the writer now proposes to attempt.

THEORETICAL ASPECTS OF AIR POWER

The restrictions imposed by lack of range, engine power and load-carrying capacity on the aircraft used in the last war prevented the contentions of the advanced school of thought being tested out in actual operations. Among the adherents of this school were many shades of opinion, ranging from those who became almost fanatical in their belief that modern air power would of itself prove decisive in any future war to those who contended that while an army and navy were still essential, the air force would prove to be the main arm. The more moderate school, while recognizing the increasing power of the air arm, took a more parochial view and contended that army and navy wings could achieve all that was necessary and that an independent air force was not essential for the efficient prosecution of operations. There were, of course, "die-hard" conservatives who maintained that a separate air force was not only unnecessary but dangerous, in that it would become so independent that the vital needs of the Navy and Army as regards air support would be either side-tracked or forgotten.

During the last twenty years several writers have sought to prove the theory of air power as the decisive factor in total war. They contended, with justification, that the quickest way to ensure victory is to undermine the morale of the enemy's civilian population and to paralyse the industries vital to the war effort. To achieve these two objects, the ruthless use of air power seemed the obvious answer. In other words, one of the main functions of air power in this conception of total war is to attempt to bomb the enemy into submission by attacking his home front. Theories which envisaged an air war on civilians, irrespective of age, sex or employment, were anathema to public opinion in all peace-loving nations, especially in this country and the U.S.A. Nevertheless, it was abundantly clear that our potential enemies, whether in Europe or the Far East, would not let humane considerations stand in the way of a quick road to victory, especially in view of the fact that the definition "military target" is capable of wide interpretation in the theory of total war.

Assuming that large-scale attacks against the civil population and industrial installations were inevitable in any future major war, the unknown factor was the degree to which civilian morale could be broken by ruthless bombing. London, and other cities, had been bombed in the

last war, but even by 1918 air raids were spasmodic and the scale of attack was comparatively insignificant; consequently there were insufficient data on which to base any definite conclusion. Japan's unprovoked campaign against China, Mussolini's invasion of Abyssinia and, latterly, the civil war in Spain provided, to some extent, up-to-date and valuable information as to the effect of raids by modern aircraft on the civil population and industrial installations, as well as on purely tactical targets in the field. Nevertheless, the conditions under which these campaigns were fought and the inequality in air strength of the opposing sides still left unanswered many questions appertaining to the principles on which air power should be organized and applied in any future war of the first magnitude. It did seem clear, however, that the ruthless bombing of open towns had not broken the will to resist of the people of Madrid or Barcelona, or of the teeming millions of China, despite the lack of protection against the raiding aircraft and the almost complete absence of properly organized and equipped civil defence services.

Now, since the outbreak of war in Europe in 1939, we have, sad to relate, all the data that could possibly be required from which to draw conclusions as to the effect of air power in every phase and in every aspect of total war. We have seen it used for the destruction of great cities such as Warsaw, Rotterdam and Belgrade, with consequent heavy casualties to the civilian inhabitants; we have seen it used against refugees seeking to escape from the battle zone of forces striving for mastery on the ground; we have seen it used against our own cities, ports and industries; and we have seen it in action against virtually unarmed merchant ships. Yet it cannot be said that air power alone has broken the will to resist of the civil population in any of the countries already overrun by Hitler's armies. It has been stated that Leopold of the Belgians and the aged Marshal Pétain both threw up the sponge to save the civil population from the horrors of still further bombing and machine-gunning from the air. This may be so, but the fact remains that, concurrently with their attacks against the long streams of refugees in Belgium and France, the Germans were relentlessly pursuing the field armies which had been beaten in open combat. In fact, many of these air onslaughts on civilians were made in direct relation to the main battle plan with the object of paralysing troop movements by blocking the roads in rear. There is nothing new about this latter technique: in the last war shell fire from long-range guns was employed for the same purpose, irrespective of whether there were civilians on the roads or not. Air power has merely made this form of harassing the enemy more effective and easier of application.

It would appear, then, that while the field armies remain intact and capable of resistance, air power cannot, even when used with ruthless

ferocity, obtain unaided a decision by bombing the civil population, always provided that the Government itself stands firm.

We must now turn to the case of air power as a means of attacking the enemy's industry and war potential. Detailed knowledge of the effect of our bombing industrial areas in N.W. Germany, in Italy and the occupied territories will not be obtainable until after the War, nor is it possible to estimate with accuracy the reduction in output caused thereby. We know what the Germans have managed to achieve in this country, and on the same analogy there is no reason to suppose that the destruction wrought by our bombing of their industrial installations has yet come within measurable distance of crippling their output and resources to the degree necessary to neutralize the general war effort. Indisputably, the bombing of industrial areas which are defended against air attack will only yield, like a sea blockade, long term results and will not of itself secure quickly a major decision.

To deal with the purely military aspect of air power, perhaps the most bitter controversy which raged among the theorists in pre-war days was that of the aeroplane versus the capital ship. Air enthusiasts maintained that a few squadrons of bombers or torpedo-carrying aircraft could sink almost at will the most powerful battleship provided that the pilots were brave and skilful and willing to accept heavy casualties in machines and personnel. Moreover, it was alleged, the cost of aircraft *vis à vis* that of a capital ship is small, not to mention the disparity in the number of trained personnel required.

During the years following the Armistice of 1918, many experiments were carried out to prove the correctness of the theory of the vulnerability of capital ships to air attack, but it required the stern test of war to provide really reliable data on which to base conclusions. During the course of the War many air attacks have been made by all the belligerents on warships, including those of the heaviest types, at sea and while in harbour. The methods employed have ranged from high level to dive-bombing, and torpedo-carrying aircraft have been extensively employed. The British attack on Taranto by torpedo-carrying aircraft was outstandingly successful, and our bombing operations over a period of months immobilized the German battle-cruisers "Scharnhorst" and "Gneisenau" and the cruiser "Prinz Eugen" in Brest, until in desperation they took the risk of their dash home. On the other side of the slate, we have to record the sinking by the Japanese of the "Prince of Wales" and the "Repulse" at small loss in aircraft and with an apparent ease which is almost inexplicable in the light of information at present available to the public. These two operations, apart from many others not so conclusive in their results, appear to show that those

who argued that the capital ship was vulnerable to air attack were not far wrong in their contentions.

As regards operations on land, many soldiers realized that air co-operation in a future war would be required in a much wider sphere than merely in the service of reconnaissance and the direction of artillery fire. Financial stringency, conservatism and a host of other factors, however, prevented the realization of what was recognized to be a vital need. Despite all the difficulties induced by years of disarmament, an air component was included in the B.E.F. that went to France in September, 1939, but it was not designed nor trained to give the type or scale of co-operation required. Neither in the Army nor the R.A.F. had we been able to develop the technique of the armoured spearhead supported by "flying artillery." Yet the civil war in Spain, the occupation of Austria, and information provided by many observers conversant with the preparations in Germany supplied the "writing on the wall."

It is futile, however, to hold a "post-mortem" on past sins of omission or commission. The editors of the popular Press console themselves and their readers by making the professional sailors, soldiers and airmen the scapegoats for the lack of military organization requisite to compete with the requirements of modern total war. The Navy and the Army are, in addition, accused of conservatism and jealousy of the R.A.F. so that air power was not allowed to develop unhampered by the claims of the two older Services. Actually, in a democracy pinning its faith to the ideal of the League of Nations and bound to a policy of unilateral disarmament, none of the Services had much say in the matter. No amount of advanced thought or correct appreciation of requirements should war break out could succeed in obtaining the vote of a single extra shilling for the armed forces while an apathetic public was blind to the plain implications of signs and portents in the aggressive policy of the Axis Powers.

THE LESSONS OF THIS WAR

Before discussing the effect on organization of what we have learnt from the use of air power in the present conflict, it is necessary to set out what these lessons are. It is proposed to analyse them under four main headings, namely :

- (a) Air attack on industry and on the civil population.
- (b) Air support of the Royal Navy.
- (c) Air support of the Army.
- (d) Air support of Combined Operations.

AIR ATTACK ON INDUSTRY AND ON THE CIVIL POPULATION

Modern war is a war of machines. The bravest men cannot be successful in battle without material and equipment as good as and equal in quantity to that of their opponents. Therefore it is platitudinous that the protection of factories and all installations engaged in the production of war material is an essential component of the general strategical plan. Air attacks on the civil population may be undertaken in an attempt to break their morale and will to resist, or with the definite object of causing casualties and depression among the workers and so lowering output. In other words, the enemy may attempt destruction or neutralization, or both, in his attacks on industry. Included in the terms industry are ports, communications, power and light—all of which are indispensable components in the war potential.

It seems clear from the experience of the past two years that merely passive and ground defence against air attack, although essential factors, are insufficient to protect the industrial life of the country from the devastating effects of determined air attacks. The hostile bombers must be taken on in the air, preferably *en route* and not in close proximity to their possible objectives. This entails the allocation of fighter squadrons sufficient in number to deal with the estimated maximum scale of attack and based on aerodromes suitably sited to enable them to carry out this role at very short notice. Further, the vulnerability of bombers attempting daylight raids when fighter protection is adequate and well organized, as was demonstrated in the Battle of Britain, will force the enemy to make his attacks mainly at night. This tactic entails, in turn, the allocation of night fighter squadrons in considerable numbers.

The main lesson, therefore, appears to be that a considerable number of fighter squadrons must be allocated to the paramount duty of protecting industry and, as far as possible, the civil population as a whole from air attack. Admittedly these squadrons can be given the duty of dealing with an invasion by airborne troops and of counter-attacking aircraft supporting attempts to land from the sea. Nevertheless, while the direct threat of invasion may be intermittent or eventually non-existent, that of serious air attack against industry and the life of the community is always present so long as the enemy possesses a bomber force in being.

The deduction, therefore, is that any future organization of the three Services must legislate for the active defence in the air of the vital industrial areas, port facilities and communications. The fact that aircraft thus allotted can be given secondary roles in the general scheme of defence alleviates, but does not lighten, the burden when drawing up the allotment of available resources.

AIR SUPPORT OF THE ROYAL NAVY

Experience has proved that warships, of any type, at sea are vulnerable to air attack unless an "umbrella" of fighters is available: improvements which have been made in A.A. armament and armour protection are not effective substitutes. Their vulnerability is increased if engaged in operations in narrow waters within reach of shore-based aircraft. Similarly, ships in harbour can be successfully engaged by high or low level bombing and torpedo attack unless sufficient fighters are available to take on the enemy aircraft in the air. It is unnecessary to stress that these statements are amply borne out by our losses off Crete and the recent sinking of our two capital ships in the Far East, as well as by our own successes at Taranto and against the "Bismarck."

The advisability of continuing to build capital ships is not a question which comes within the scope of this paper. Perhaps, as Admiral Richmond has frequently stated, we cannot drop this type of vessel while other naval Powers continue to build them. Therefore, for the purpose of discussion we must assume that in the future our Navy will still include the heavy battleship. In any event it is abundantly clear that fighter aircraft must be an integral part of the composition of any fleet, or squadron, whatever the type of ships composing it. Obviously, so far as the British Navy is concerned, the essential fighter protection cannot normally be provided by shore-based aircraft. Therefore, these aircraft must either be conveyed in carriers or in the fighting ships. In addition, aircraft for offensive action against opposing ships must also form an integral part of the fleet organization if they are to be able to seize the right moment to strike.

Lastly, the defence of merchant shipping against air attack by long-range bombers cannot be overlooked. In the Battle of the Atlantic, the most effective answer to this method of attack appears to be fighter aircraft launched from ships in the actual convoy selected by the enemy as the target. Patrolling by aircraft of the Coastal Command is not sufficient: local fighter protection for each convoy proceeding within range of bombers based on shore aerodromes appears essential.

AIR SUPPORT OF THE ARMY

The tasks required from the air by the Army are many, embracing reconnaissance (including photography), direction of artillery fire, inter-communication and liaison, close support in attack and defence, and the tactical harassing of the enemy's communications and troop concentrations far out of range of ordinary gunfire.

The technique employed by the German army in combination with the *Luftwaffe* is now common knowledge and there is no need to enlarge

upon it here. Suffice it to say that the Germans have succeeded in establishing a high degree of intimate co-operation between the two Services despite the fact that they have independent organizations.

Up to date, reports from Libya appear to indicate that our 8th Army has received satisfactory support from the R.A.F. although, as yet, no details are known to the writer as to the machinery which was set up to achieve this result, or whether any weaknesses have manifested themselves in the co-operation required. In the absence of detailed knowledge, therefore, of the lessons learnt in the present Libyan campaign, it is still a matter for speculation as to whether aircraft designed exclusively for employment in an independent air force can give the type of close support required :—

- (i) To help tank and infantry attacks on to their objectives.
- (ii) To help in destroying hostile tanks.

Here again, the terms of reference of this Essay do not demand a technical discussion regarding design, but the question does arise as to whether with a separate Service the requirements of the Army will be fully considered when evolving new types of aircraft.

The next lesson which has been exemplified on numerous occasions in the past year is the vital necessity of defending aerodromes. This is a question which intimately concerns the Army as, at present, this important duty is their responsibility. But to defend an aerodrome ground defence alone is insufficient, fighters are essential to prevent high level bombing and to take on attempts at landing by airborne troops. Quite apart, however, from the methods employed, unity of command of the forces detailed for the defence of individual aerodromes is a vital necessity. At present, this unity may be provided for theoretically but it certainly is not achieved in practice. In nearly every case the R.A.F. Station Commander is senior to the soldier who is appointed as Defence Commander, with the result that the human factor frequently looms large in the drawing up of the plan of defence, especially when the R.A.F. ground staff form part, and sometimes a very large part, of the man-power available to man the perimeter. With the best will in the world, dual control is difficult to avoid, with consequent weaknesses in the initial lay-out and control of the defenders during battle.

It would seem, therefore, that a suitable organization must be evolved which will put the machinery of command on a unified basis and eliminate all question of dual control. The present unsatisfactory position is accentuated in this country where the local commanders of the A.D.G.B.,¹ the Home Guard and the Ministry of Transport (for road blocks) all have a finger in the pie, not to mention the civilian officials

¹ Air Defence of Great Britain.

of the utility companies which supply power, light and water. It must also be emphasized that it is not only operational aerodromes which must be adequately defended: training, ferry service, test and experimental airfields must similarly be protected. In fact, aerodromes of every description which could be of use to the enemy in developing his major plan of attack must be guarded. The whole matter raises many difficult problems not susceptible of easy solution, but it is satisfactory to note that the Axis forces in North Africa seem to have left important aerodromes open to attack by our long range motorized patrols. This we may hope is an indication that our present enemies have not succeeded any better than we have in finding a foolproof method.

Lastly, mention must be made of the need for intensive training in co-operation between the R.A.F. and the Army. This is hardly a lesson culled from the present conflict, as the necessity is obvious and was fully realized before the War. The writer brings it to notice, however, as this form of combined training appears to be singularly lacking for the Army at home. It is, of course, realized that the R.A.F. is pre-occupied with many other urgent matters and possibly, even now, handicapped by lack of machines and equipment. Nevertheless, one cannot help wondering when the Army Co-operation Wing of the R.A.F., formed earlier in the year,² will begin to function on the scale required to ensure that essential training in all aspects of co-operation with the air does not lag behind other forms of training and practice for battle.

AIR SUPPORT OF COMBINED OPERATIONS

For an island empire, landings from the sea and the air will nearly always be an essential preliminary to carrying the war into the enemy's own territory. Before the advent of modern air power, control of sea communications was sufficient to enable the attacker to arrive off the coastal localities selected for landing in reasonable security. Now, air superiority, at least local air superiority, is also necessary. Not only is it essential to protect the transports from air attack but also the escorting warships. Without local air superiority, it is unlikely that the Japanese would have been able to effect their large-scale landings on the Malayan beaches and in the Philippines. Therefore, in any combined operation which involves a sea-borne attack, the three Services each have an equally important role to perform. In the successive phases of the operation, each Service may be the predominant partner in turn. For example, during the approach phase across the sea, the Navy will normally be the predominant partner until such time as the convoys come within range of hostile shore-based aircraft. Once a landing is effected the Army becomes the predominant partner and all resources must be

² i.e., 1941.

thrown in to support the troops in forming a beach-head and in the subsequent advance inland to the final objectives.

The problems inherent in the undertaking of combined operations under modern conditions of warfare were extensively studied academically before the War. As a result, it was contemplated in the Manual of Combined Operations that the commander in each phase should be found, normally, from the Service which was the predominant partner at that particular stage of the operations. The writer was never particularly enamoured of this solution, which appeared to be a compromise arrived at because the vested interests of the three Services were given priority as a factor in the appreciation. Actually, the whole question has a wider implication. The defence of a coast-line obviously involves combined operations in as great a degree as those undertaken to effect landing in the enemy's territory. The Japanese attack on Malaya provides an excellent and vivid illustration of this point. It seems clear that a successful defence necessitated the joint and unified efforts of all three Services, yet two capital ships set out to destroy a sea-borne attack apparently without air support or the fighter protection necessary to safeguard them from their opponent's air attack. The result was a disaster of the first magnitude at this stage of the War in the Far East. Whether the ships were sent out without an air escort owing to a clash of vested interests or because of conflicting and urgent demands which could not all be met is not yet known to the writer. Nevertheless, it is impossible to avoid the uneasy feeling that the bombing of aerodromes produced a crisis to which everything else was subordinated, and that the Admiral in command was told that no aircraft were available. On the other hand, this failure may have been due to sheer lack of adequate air resources.

In the absence of complete information no attempt will, therefore, be made to draw any firm deductions from the Malayan operations, but it does seem clear that some system of real unified command and control is of paramount importance in any form of major combined operations in which the three Services are engaged. The success of the small-scale raid carried out on the coast of Norway on 27th December, in which the Navy, Army and R.A.F. have participated, does not, in the writer's opinion, invalidate this argument.

SUMMARY OF CONCLUSIONS

From the foregoing brief examination of the lessons this war has taught regarding the employment of air power, it is abundantly clear that both the Army and the Navy require direct, as well as indirect, support from the R.A.F. in every operation or task they are called upon to undertake, either in combination or independently. Further, this

support must not only be immediately available when called for but must be of the type required by the tactical situation pertaining. In other words, fighter, bomber and torpedo-carrying aircraft must all be held in readiness. The question which arises is, therefore, whether our present major organization is calculated to produce this ideal of co-operation.

We have three Services—the Navy, the Army and the Air Force—co-equal with separate command and administration, and each with its own representative Minister in the House of Commons. Machinery to ensure the effective co-operation, both strategical and tactical, of these three Services exists, but is it really effective in ensuring not only intimate co-operation when battle is joined but also that sufficient aircraft of the right type are available at the right time and place? True co-operation is not merely a question of good communications or personal liaison: unity of control, a common doctrine and outlook and an intimate knowledge of each other's tactics and characteristics are also essential.

To the writer, unity of control and command appears to be a primary consideration, but it is not clear to him how, in view of all the complexities of modern war, this can be satisfactorily achieved if the air power vital in all operations undertaken by the Army and Navy is controlled by a third, and co-equal, Service. Charity begins at home, so it is more than likely that if the commander of the R.A.F. in the main or one of the subsidiary theatres should find that an air crisis has arisen, the needs of the other two Services will be incompletely met, or altogether shelved. The writer is well aware that, on paper, provision exists to meet such a contingency, but the human factor is perhaps insufficiently taken into account. Further, the whole tempo of war has been accelerated; quick decisions and the rapid application of balanced forces at the decisive time and place are essential. To-day time is a more vital factor in war than at any previous period of military history. If the command and control of available resources is divided, time will inevitably be wasted in arriving at a decision and may also be wasted in implementing it when made.

To suggest, as a solution, that the R.A.F. be abolished as a separate entity is not only on a par with "tilting at a windmill," but ignores the wider aspects of the problem. Vital as is the necessity of ensuring that adequate and suitable air support is available at all times and in all circumstances for the Army and the Navy, it is no less vital to legislate for the wider exploitation of air power in its capacity to undertake long range attacks against the enemy's industries, communications and counter-preparation. To tie the available air resources down to naval and military control might result in parochial conceptions and dissipation of

power. Serious overlapping would also be likely to occur. Nevertheless, there is a clear need for a purely Naval Air Wing in the shape of the extension of the existing Fleet Air Arm, also for the creation of a real Army Wing, apart from an Independent Air Force for operations which can be carried out by aircraft alone. This Independent Air Force must contain a component allocated to the defence of industry and the civil population in all its many aspects.

On the other hand it would be a retrograde step to divorce altogether from the R.A.F. the Fleet Air Arm³ and the Army Wing. To do so would produce overlapping of every kind and seriously prejudice, from the major point of view, economy of force, especially as regards the design and production of aircraft. In fact, many would argue that the R.A.F. should absorb the Army and Navy rather than that this Service itself should be split into three divisions, of which two would be under the auspices of the other Services. Exaggerated as this possible argument may sound, it is within the bounds of possibility that in the future the R.A.F. will be the predominant partner in all operations, with the Navy and Army merely powerful adjuncts to exploit and consolidate the successes achieved by air power. This futurist vision is to-day less fantastic than the writings of Jules Verne were deemed to be in the last century or those of H. G. Wells in this. Although, so far as it is possible to forecast, an Army and Navy will always be necessary, the inevitable improvement in the load-carrying capabilities and general performance, and perhaps in the near future revolutionary change in design, will enable air power to be even more versatile and effective in every operation of war than it is to-day. The capital ship may be relegated to the museum, and infantry, which still forms the bulk of every army, become as out-of-date as the bowmen of Cr cy. For the present, however, there are definite limitations to air power and it cannot by itself obtain major decisions against a well-armed and properly equipped opponent. Yet it is equally quite clear that without adequate air resources in support the other two Services cannot do so. Therefore for the present, at any rate, the trinity must remain; but from the operational point of view it must be at the same time a unity, not only in name but in real concentration of effort and purpose.

MAJOR ORGANIZATION

The lessons which should, in the writer's opinion, be learnt now as regards the future organization of the three Services can, therefore, be summarized as follows :—

Naval

The Fleet Air Arm should be expanded to the extent necessary to provide at sea fighter protection and bomber/torpedo aircraft for every

³ The Fleet Air Arm is part of the Navy, not of the R.A.F.—EDITOR.

fleet formation. In theatres of operation where circumstances permit such aircraft can be shore-based, but the squadrons allocated must be under the direct and undivided control of the naval C.-in-C. In the case of shore-based aircraft they need not necessarily be part of the Fleet Air Arm so long as there is no question of dual roles or divided control: the narrow waters round the coasts of the United Kingdom, in parts of the Mediterranean, and in the China Seas are cases in point. Incidentally, the various operations in the Mediterranean during the past year have proved the value of the Fleet Air Arm up to the hilt, although it is not suggested that the R.A.F. has not given additional support when circumstances and resources have permitted.

It is also for consideration whether shore-based fighter aircraft of a type which can be easily assembled and prepared for action, should be carried in special ships, other than the expensive and vulnerable carrier, to enable aerodromes to be organized quickly on land in proximity to any temporary fleet base it is found necessary to use. These aircraft would form part of the Fleet Air Arm and be complete with ground staff and operational equipment, including workshops. This proposal might have solved the question of air protection for the "Prince of Wales" and "Repulse" as it appears that no aircraft carrier could be spared to accompany these ships to the Far East. Owing to the limited range of fighters, such units would obviously be of use only when the fleet is operating in narrow waters.

Army

It is suggested that an Army Wing of the R.A.F. be formed on the lines of the Fleet Air Arm. Whether the pilots are found from the Army or the R.A.F. does not seem to matter provided that they receive the special training required and remain with the Army Wing, at any rate until they reach the higher zone of promotion.

It must be made clear that the organization that the writer has in mind is not merely an Air Co-operation Wing of the type created before the War, whose activities were confined to reconnaissance and inter-communication, but a Wing containing fighters, fighter-bombers and such other aircraft as may be designed to give close tactical support to the troops on the ground. Long-range strategical bombing would still continue to be carried out by the Independent Air Force operating on a co-ordinated plan.

The Army Wing would be under the command of the military C.-in-C. but, owing to its special training and perhaps special type of aircraft, would be in a position to give better co-operation than an air component on the lines of that which accompanied the B.E.F. to France on the outbreak of war.

The control and command of the squadrons of the Army Wing could be decentralized in accordance with the tactical situation very much in the same way as the artillery is handled. The armoured divisions, which form the spearhead of a modern army, would perhaps require a permanent allotment of squadrons as an integral part of their organization. Dive-bomber squadrons appear to be allotted to the German panzer divisions, although the writer has not seen any clear-cut exposition of this alleged allotment or the machinery employed to handle it. In any case, there is no reason why we should copy German methods unless we cannot find better ones.

The details of such an organization are outside the scope of this paper; the main point is, however, that the creation of an Army Wing of the R.A.F. appears to be, on the face of it, very desirable, if not essential. The lessons from the present Libyan campaign may show otherwise but that remains to be seen. Meantime, without a definite allotment of aircraft to the Army it is difficult to carry out combined training in preparation for battle, not to mention the vexed question of evolving the right type of aircraft to carry out the close tactical support the Army wants.

As regards this latter statement, admittedly it is preferable not to multiply types; but just as the Navy requires specially designed aircraft, so the Army requires aircraft capable of destroying by gunfire the heaviest mark of tank and of giving the closest low-flying fire support, both in attack and defence. It is not certain that any of the present types in service are best suited to carry out these roles which might, in a layman's opinion, be quite well performed by aircraft of lower performance and cheaper manufacture. A high degree of armour protection against fire from the ground is also necessary.

Air Force

If it be accepted that the creation of a special Army Wing is necessary and that the Fleet Air Arm be expanded, there remains for consideration the organization of the independent air striking force, the defence of industry and the civil population, co-operation in the protection of sea communications, and the safeguarding of aerodromes.

From the major point of view, the independent air striking force would appear to be satisfactory as at present organized, and the creation of separate Wings for the Army and Navy should not affect its composition or employment: both would be based on the experience gained in recent operations. Its control and direction would remain as at present and its employment would be dictated by the requirements of the general strategical plan.

The provision of the fighter squadrons required for the defence of industry and the civil population is also a R.A.F. responsibility and no change in organization appears to be required. It is for consideration, however, whether the guns and searchlights allocated to the static defence of industrial centres and big cities should not be taken over by that Service. It is doubtful if any real advantage would accrue, as the problems of co-operation in this type of defence are not quite so difficult as those in mobile operations in the field. On balance, it would appear that the manning of the ground A.A. defences sited to protect industrial or civil centres can remain an Army responsibility without loss of efficiency in beating off attacks.

The Coastal Command organization appears to meet the case and to provide effective co-operation with the Royal Navy. Therefore, in the absence of detailed personal knowledge of any weaknesses found in this system, the writer does not propose to make any comments on this aspect of R.A.F. organization.

The guarding of their own aerodromes should also be made the responsibility of the Royal Air Force. Continuity of policy could then be ensured and the danger of divided counsels removed. In the United Kingdom, important aerodromes deemed to require defence by heavy A.A. guns would be brought within the general lay-out of the A.D.G.B., but the actual close defence of the perimeter against airborne or ground attack should still be a R.A.F. concern. On the other hand, should an important aerodrome be captured, or be in danger of capture, it should remain an Army responsibility to counter-attack. If, however, aerodromes are properly defended against parachute or other forms of airborne attack, the need for counter-attack would, in a measure, disappear and they would constitute "strong points," or centres of resistance, in the general scheme of defence.

An exception to the proposal that the R.A.F. should be given the responsibility of guarding their own aerodromes might be necessary in the case of advanced landing grounds organized during mobile operations. These the Army should, perhaps, still remain responsible for guarding until such time as the battle stabilized, in much the same way as escorts have frequently to be provided for batteries of the Royal Regiment of Artillery.

This proposal admittedly involves the creation of aerodrome defence troops within the framework of the general R.A.F. organization, but as the Army would thereby be relieved, in the main, from this task no insuperable difficulty appears to stand in the way of its adoption. Incidentally, it is understood that special R.A.F. defence detachments are in process of forming to guard aerodromes in Great Britain.

COMMAND AND CONTROL

The present system for the major direction of national policy and resultant strategy was evolved as a result of experience in the War of 1914-18. Machinery exists for the co-ordinated implementation by the three Services of Cabinet policy and decisions, and it appears to have stood the test in the present conflict. Weaknesses which have occurred in rapidity of decision and in taking the initiative are probably more due to those inherent in a democratic form of government and the unpreparedness consequent upon disarmament than to defects in the machinery set up to control and direct the activities of the armed forces.

It is in the tactical and minor strategical spheres that a change in the system of command and control appears necessary. If it be accepted that both the Army and the Navy should have its own Air Wing, then it would appear to be a natural corollary that officers from those Services should command it and that the subordinate commanders and staff should also be mainly drawn from these sources. Naturally, such officers would receive special training in air duties and co-operation. In actual fact, there is no mystery about the tactical handling of air forces, it is all a question of training and practice: it is in the flying of the aircraft and their maintenance that specialized technical training is required.

Prior to the War, the Staff Colleges of the three Services and, in the major sphere, the Imperial Defence College provided training in the handling of air power, but comparatively few officers underwent training at these establishments. A Combined School appears to be essential so that officers of the three Services selected for duty with the Naval and Army Wings of the R.A.F. could undergo a special course of training, in addition to all commanders and staff officers, both naval and military.

To sum up: the writer has perforce to make his deductions in the absence of much detailed information regarding the operations of the last two years which is really essential if arguing from false premises is to be avoided. He has, therefore, based his conclusions on the results achieved as notified in the official communiques rather than on a critical analysis of the planning and decisions which led to success or failure. This is inevitable while secrecy regarding operations has to be preserved.

It may be objected that the contention that separate Army and Navy Wings of the R.A.F. are necessary breaks the principle of economy of force and ignores the experience of the last war which brought a separate Air Force into being. The answer is that "full circle comes the wheel": in other words, modern air power cannot be compared

with that of 1918 or even of 1930. To-day the R.A.F. has established itself as an essential, if not the predominant, partner in every military operation—the word 'military' being used here in its widest sense—and in every phase of total war. It appears only logical, therefore, that its organization should be changed and expanded where necessary in order to conform with its increased responsibilities and in relation to the vital need for its intimate co-operation with the other two Services. Vested interests must be subordinated to the common effort and inter-Service jealousies eliminated. The trinity of the three Services must be a unity in fact as well as in name, and the requisite organization must be evolved to ensure this vital concomitant of securing rapid decision under the conditions of modern war.

THE HOME GUARD

By MAJOR-GENERAL THE VISCOUNT BRIDGEMAN, D.S.O., M.C.
Director-General of the Territorial Army.

On Wednesday, January 28th, 1942

LIEUTENANT-COLONEL SIR EDWARD W. M. GRIGG, K.C.M.G.,
K.C.V.O., D.S.O., M.C., M.P.—Parliamentary Under-Secretary of State
for War, in the Chair.

THE CHAIRMAN, in introducing the Lecturer, said: I have to undertake a duty which I am sure is superfluous, and that is to introduce to you Major-General Bridgeman. He is now Director-General of the Home Guard and has been so for nearly a year. Before that he was Deputy-Director, with General Eastwood, now of the Northern Command, as Director. Before that he was G.S.O.I. of Staff duties with Lord Gort in France. He was therefore mixed up in operations over there and enjoyed all the amenities of Dunkirk; so that he has not only been on the organizing and training Staff, but has had very useful experience of this war in the field. It has been my pleasant duty as the Minister more particularly connected with the Home Guard in the War Office to work closely with him, and I could not find anybody more thorough, more conscientious or more agreeable to work with. I have very great pleasure in introducing him.

LECTURE

WHENEVER I sit down and think quietly about the Home Guard, I am more and more astonished at its birth and development. It was formed as the result of a broadcast by Mr. Eden on 17th May, 1940, when the Battle of France had been in progress a week and there was every reason to expect the Battle of Britain in another week's time. It made an instant appeal to the country and, although at the time very few arms were forthcoming and very little equipment, it continued to grow in numbers all that summer and autumn till it reached a figure not so very far above what it is to-day.

Now I think it is fair to say that most of those who at that time joined the Local Defence Volunteers, as they were then called, did so in the firm belief that invasion was imminent. But that is just another instance of the way the enemy *will* not fight this war the way we expect him to do it. He has kept the Home Guard hanging about all this time without a Battle of Britain and, at the moment of speaking, there is every prospect of his keeping the Home Guard hanging about a little longer. This is boring for the Home Guard and one certainly does hear every now and then, though not very often, foolish talk about "the men losing all their interest." There was a certain amount of the same talk when some people thought the Russians were going to win the War all by

themselves. But I think there is another point of view, which I commend to you. It is that by the mere fact of its existence and efficiency the Home Guard has already materially contributed to the avoidance of invasion; and the better armed and better trained it becomes, the greater deterrent it will be to the Hun from invading us and the greater will be the freedom of H.M. Government to despatch units of the Regular Army to theatres of war overseas. Therefore our problem to-day is how to improve the efficiency of the Home Guard in every possible way, without thereby losing that voluntary spirit which inspired it at the outset.

There are one or two other facts about the Home Guard which are worth mentioning. It is the first volunteer force of its kind since the one raised in 1803 to guard against Napoleon's projected invasion. That force, which included Mr. Pitt as a battalion commander, had a paper strength of 370,860 out of a population of eleven million, or 3.3 per cent. of the population as compared with an approximate ratio of 3.8 per cent. of Home Guard strength to population to-day. Since the start, recruits have been accepted with the minimum of enquiry into their antecedents, and have been trained to the use of arms. This step, which passed almost unnoticed in this country, would in any European country have constituted a political risk of the first order. Just imagine it in Germany or Italy.

I rather fancy that the United States are taking a leaf out of our book just now. They have been taking a lot of interest in the Home Guard; and their own counterpart the State Guards are, I believe, now taking shape much on Home Guard lines. Let us wish them all success.

Then again the news value of the Home Guard has been great and constant, and its value as an advertising medium is far from negligible.

Never did a child take so much intelligent interest in its own growth. The Home Guard includes in each of its ranks men of every walk of life and of every degree of eminence. The other day I attended an important meeting about the force where a high personage gave an expert technical opinion. He then proceeded to give an equally expert opinion from another angle, that of a Home Guard volunteer!

It would be just to say that if ever the War Office left off trying its best to make the Home Guard efficient—may I say that is unlikely as long as Sir Edward Grigg is there—the Home Guard would rise up in wrath and insist on being taken seriously.

OPERATIONAL PROBLEMS

Such is the background against which we can examine some of the problems of the Home Guard. I would like to begin by giving you a

glimpse of the obvious: the Home Guard exists for one sole purpose, namely to oppose the enemy and defeat him should he appear in this country. Every Home Guard problem must be considered in relation to the likely role of the Home Guard unit. The Home Guard is under the operational command of the Commander-in-Chief, Home Forces, and the role of each little unit is, or should be, laid down in the defence schemes prepared by the various military commanders throughout the country by which the defence in each sub-area is organized. The chain of command is the same for the Home Guard as for the Regular forces.

It is very important indeed that every one in the Home Guard should know his operational role and, for the peace of mind of the force, that it should be changed as little as possible, particularly if a change of role involves the digging of new defensive positions. But some change is inevitable, if progress is to be made. The number of regular troops in the locality may alter and so involve a readjustment; the reorganization of aerodrome defence may involve a revision of the Home Guard units in the neighbourhood of the aerodrome, so as to bring them into proper relation with the new R.A.F. Regiment; and so on. There is a great deal of interest being taken in this just now, and I look on it as a very healthy sign.

But this question of defence schemes is just one instance of how impossible it is to deal with Home Guard problems by themselves, and without relating them to other problems of carrying on the War. The Home Guard in fact is just one piece—a rather odd-shaped piece—in the vast jigsaw puzzle which makes up the war effort of a democratic country. It has to be related on the one hand to the civil occupations of those who belong to it and on the other hand to the Regular Army. The backbone of the Home Guard consists in most places of the young and middle-aged men who are in reserved occupations; in other words of men who have not been called to the Services because they are doing an important civil job. Therefore, if these jobs are to go on, there is a definite limit to the amount of time which can be given to Home Guard training and duty before the actual invasion happens, and, therefore, to solve any problem of this kind there must always be a compromise between the demands of war work and Home Guard duty. There is no other way by which the man-power problem can be tackled; two authorities are claiming the allegiance of this same body of over one and a half million men.

For this same reason it is seldom possible, and I think never wise, to attempt to lay down too precise rules for the Home Guard. Particularly when it comes to compulsory training and duty, one hears demands that the rules should be rigorously applied. Likewise one hears stern

demands to "kick out the duds." But in the next breath there comes an even sterner warning against putting the Home Guard into the strait jacket of the Regular Army, and people accuse the War Office of never having realized that cows require milking even though the cow-men may be in the Home Guard. You can hear it going on all the time in Parliament and in the Press. Let me take another aspect of the problem. There are scarcely two battalions of the Home Guard which are exactly alike. Let us take some extremes: a battalion in the Western Highlands, and a battalion in the City of Westminster: a railway battalion and the Press battalion from Fleet Street. Varying in area from a square mile to a thousand square miles: from perimeter defence to a series of independent tasks, so to speak, under the orders of general nuisance. And yet there is no clearly defined line between any of these extremes, but an infinite shading between one unit and another.

PART TIME AND LOCAL CHARACTER

Now, another governing factor is the local character of the force. This is closely bound up with its part-time character since, except under the stress of actual battle, Home Guards cannot be taken too far away from their civil occupations.

Furthermore, being a local force the Home Guard must rely on its local leaders. It must have the best local leaders obtainable, but cannot have better than the best. If one wished to make a change in some country districts there is really no choice except to import a carpet-bagger and, though I know there are two opinions on this, I for one firmly believe that carpet-baggers are the wrong people to run the Home Guard and that the man with local knowledge, despite any military shortcomings he may have, is the man to lead the local Home Guard and to see that he gets the right men under him. Often an older man must be kept on for this reason. This, by the way, is one of the chief arguments for retaining the Zone Commanders. They are the heads of the Home Guard in their Counties, with the business of seeing that local requirements are met and that the right men are in the right places. With the best will in the world, the military commanders must often change and cannot have the local knowledge to handle such problems.

SOME PRINCIPLES

I have expounded this catalogue of Home Guard difficulties not by way of excuse for any shortcomings of the Home Guard Directorate, but to give you some idea of the problems which have to be faced if any good is to ensue. But out of this tangle certain principles emerge for the guidance of those, be they high or low, who will command or train or administer the Home Guard. And may I say that in stating these rules

I do not claim that we always succeed in keeping them. I do claim that we try to keep them.

First, do not attempt to make too detailed rules, but try to state the principle and the object to be achieved, and leave people to do it in their own way.

Second, assume that the commanders of the Home Guard are honest and sensible, and not knaves or fools.

Third, do not ask the Home Guard to do more than it is really capable of doing.

The last of these three rules leads me back to a very thorny problem which is always with us, like a family ghost. How much *can* you ask the Home Guard to do? There is one school of thought which is for ever anxious to "make the Home Guard mobile" and to equip it with armoured fighting vehicles. Now I am all for weapons and armour in the Home Guard, but any proposal of this kind involves collective training since it is not as a rule wise to use A.F.Vs. singly.

There is another school of thought—a commoner one—which is all for scattering the available men by twos and threes over the countryside as if with a pepperpot, instead of undertaking a smaller commitment with a relatively stronger force. And while nobody wants to curb initiative or blunt keenness, I think it is even worse to allow wishful thinking or foolish optimism to lead us to take on jobs, against the toughest enemy in the world, of a kind which commonsense tells us are not really suitable to the Home Guard.

There are so many jobs, on the other hand, which the Home Guard is much better fitted to do than the Regular soldier, because he is fighting on his own ground and knows its value; and it is under these conditions, I think, much more than in more highbrow warfare that the Home Guard will be able to get the best results from his weapons. After all, Goliath came off second best because David could shoot straight with a simple weapon.

Don't let us forget that this is a cad's war. There are no rules, except to kill any German who lands in this country by any available means; and the more lowbrow the battle is, the greater the likelihood of achieving that essential ingredient of victory, namely surprise, by which the Home Guard, if it uses it rightly, can discount whatever advantages of training and equipment the enemy may possess.

ARMAMENT

So we come to the toughest of all Home Guard problems, that of armament.

You will not expect me to go into details in a public lecture, beyond saying that at the root of nearly every Home Guard problem is the problem of proper supply, proper distribution and proper types of equipment; and that the problem of Home Guard equipment, great though it is, is only one part of the vast production problem of the Allies at War. I might also mention that the Home Guard is not exactly a small force, and that a demand for say half a dozen Mills bombs per man very soon reaches astronomical figures!

MAN-POWER

Let us come then to some of the other problems which face us this year. The first of these is the big group of man-power problems.

Man-power is getting shorter as industry and armed forces expand; when the Home Guard was first raised there were many more men available to volunteer than there are now. Ever since then the numbers have been harder to get; more men were called up each month than there were lads attaining the age of 17; men were working harder and harder and had less time to spare for Home Guard duties. So the time arrived when there remained few volunteers and a large number of slackers to whom the call of volunteering did not appeal. The policeman had to come. It was decided as you all know to apply compulsion, both for enrolment and for training, to the Home Guard at the same time as it was applied to the Civil Defence Services.

We have been at such pains to explain what compulsory enrolment and compulsory training mean by Army Council Instructions, in the Press and on the air—and what they don't mean—that I do not propose to do it again here. One thing I would say: that whether in any locality compulsion works well or badly depends to a very large extent on how it is operated and interpreted locally. I'm not brave enough to venture much of a forecast, but I shall be surprised if much trouble arises broadly speaking—for after all this is war-time and, if compulsion is put on the slackers, who should take their part? Still we shall watch very carefully how the new machine works at the start and try to oil any stiff joints.

It is just under a week since we made the final announcement on the air and in the Press, and there have been very few reactions to it. I think, in fact, that it is being accepted as a matter of course.

COMPULSORY TRAINING

Compulsory training will not be easy to apply, because there are so many different circumstances under which men have to train; but it will be a very valuable factor to level up Home Guard training, if properly used. It has been a weakness in the training of the Home Guard that it was so difficult to get men out when they were wanted. It was in-

evitable, I know ; but it has resulted in spending a very long time over individual training, and in making it even harder to cross the line which divides the teaching of the groundwork from the application of the groundwork to conditions in the field.

It is one thing to teach a man to shoot. It is quite another to teach him to take up a fire position under service conditions. It is yet another thing to get him to submit to his fire being directed and controlled by his leader. And then you must give the leader proper practice in handling the men whom he will command in battle. Not many section leaders in the Home Guard occupy positions of leadership in civil life, and leadership requires not merely natural qualities but practice in its exercise.

I think, myself, that this development of the junior leader and his practice under conditions of modern battle, both in country and town, is one of the most important tasks that faces the Home Guard this year. It is a bounden duty for the old hands to bring on the young entry, for it is the young entry who are really fitted to carry out so many of the tasks requiring activity and quickness of wit which the Home Guard must learn.

Closely akin to this problem is that of the call-up. The system of individual de-reservation and the imposition of a higher age limit is bound to affect the Home Guard, since it is precisely in that middle piece that there are so many of the section leaders. I do not pretend that the Regular Army will not benefit at the expense of the Home Guard, but a good deal can be and will be done to keep the really irreplaceable leaders and instructors in the Home Guard. The problems will be solved, in part at least, by the help of the Cadet Force which is expanding far beyond its present puny strength, and I am confident that it will be a real source not only of trained recruits to the Home Guard but of junior leaders, which is most important. The expansion, with better grants and free uniform, is only just starting ; but I am in high hopes of the result.

NEW YEAR RESOLUTIONS

In the Home Guard Directorate we have taken some other New Year resolutions for 1942. Much has been done to link up the Civil Defence Services and the Home Guard from the operational standpoint. It is important to realize that, although the Civil Defence Service and the Home Guard are two distinct organizations, none the less if invasion comes they will be engaged in fighting the same battle in the same place. There is still much to do to link up the two organizations in each locality. In some respects the two will be working side by side. In other respects the two dovetail with each other. The medical require-

ments for the Home Guard for instance are met by the civil medical services as soon as the casualty has, so to speak, been evacuated from the front line. Matters such as the supply of food and decontamination of clothing can only be properly handled in full co-operation with the civil authorities, and conversely the civil authorities look to the Home Guard to afford local protection to them when carrying on their essential duties in invasion. I think that before many weeks are out there will be a great deal done in this way. It is quite right to concentrate on the battle, but sometimes one forgets that the man with the gun has to be looked after. Someone must feed him, someone must attend to him if he is a casualty, and someone must take him orders and receive his news, and we should make a big mistake if we were not to look after this rather humdrum side of the business.

Much has already been done with the co-operation of the Ministries of Health and of Food, but much still remains to do ; for it is not merely a question of issuing instructions, but of making sure that the instructions can be implemented everywhere and when implemented have the desired effect. There is, I think, much which women can do in these respects, in a voluntary capacity, but there are certain problems still not solved, and I must ask you not to press me for a more definite answer about the use of women in the Home Guard.

Our New Year resolutions must include better communications, better organization for feeding during operations, and better medical arrangements. All these things will yield to treatment, the former perhaps more easily than the latter, since signalling is one of those things which come naturally to the Home Guard as it did with the Territorial Army before the war. You can never damp the enthusiasm of the genuine signaller. Much is being done now to develop the potential power of the pigeon services in those places where pigeon racing flourishes, as it does in so many of the industrial parts of the country, and there is a great attraction in motor cycle despatch riding, particularly to the younger members of the Home Guard. Perhaps there is a risk of accidents to be faced, slightly higher than the risk of accident to the more elderly drivers of cars, and perhaps it is right to face it.

A.A. AND COAST DEFENCE

I can say more about two other developments—the use of Home Guards for Coast Defence and anti-aircraft duties. They seem to me both of them logical and useful developments of the original idea of the use of the Home Guard for local defence. They serve the useful purpose of releasing Regular troops for more active roles and of providing for the manning of the equipment which by now is coming from the factories in ample supply. Both these developments have been officially approved,

and recruits are being sought and found for these duties. Some of the A.A. units manned by the Home Guard have already gone into action and are as proud as peacocks.

HOME GUARD DEVELOPMENTS

So far, I have attempted to talk about the Home Guard plans rather than the Home Guard ailments. Not, I hope, because I am an unreasoning optimist or because I would like to prescribe what a few years ago we called the Coué treatment for the Home Guard; but because I do seriously believe that, when we face the problems of the Home Guard battle, grouses and grievances are seen in their correct proportion, which is smaller than some people think. That is no reason, however, why we should not tackle the grouses and grievances. They are not diseases in themselves, but are symptoms of a variety of diseases, and I would divide the diseases with them.

First: production difficulties, which I have already mentioned as fully as they can be referred to here.

Second: faulty organization. This is a very common infantile disease. The symptom is violent discharges of paper, which continually suffocate the patient. Seriously, the only way to stop the paper is to watch the organization unceasingly and constantly look to see how routine administration and accounting can be short-circuited. There is no royal road to success.

Third: failure to appreciate what services are required and what they cost. This again is an infantile trouble, since as soon as costings are available and the troubles have been made known, something can be done to put them right. And we have now come to this stage. The whole financial picture of the Home Guard, while not yet as good as it might be, is infinitely straighter than it was a year ago. The Territorial Associations—to whom the Home Guard owe a very great debt of gratitude—have done an immense amount in the past year to get the routine administration of the Home Guard under control, and so have the Home Guard units themselves.

Lastly, there are always local difficulties. In a vastly expanded Army and a newly improvised Home Guard, everyone cannot be expected to be 100 per cent. efficient, or know all the rules, or be monuments of tact and clear-headedness. It takes all sorts to make a world, and it takes time for a new organization to shake down in a country like our own, where people are not imprisoned or shot merely because they don't obey Army Council Instructions and where, likewise, those who write bad Army Council Instructions are sometimes given another chance. This is the British way to do things, just as the Home Guard is an

example of the British method of organization and a British feat of voluntary effort and local endeavour.

Let us look back to May, 1940, and compare the Local Defence Volunteer—unarmed, untrained and uncertain of his battle role—with the Home Guard of January, 1942, and then ask ourselves whether we cannot look forward to the coming year with some confidence that the progress of the Home Guard will be at least as great. It will be so if we all devote ourselves to the same end, namely to make the Home Guard in its training, organization and equipment fit to fight the battle and defeat the King's enemies.

DISCUSSION

THE CHAIRMAN: I understand that Lord Bridgeman would be very glad to answer any questions.

CAPTAIN W. H. CADMAN raised the question of gas training in the Home Guard and suggested, among other proposals, the formation of Zone gas schools.

THE LECTURER: The questions raised by the last speaker are not ones which I think I can properly answer off-hand except by saying that I will bring them to the notice of my friend the Director of Training. But I doubt the wisdom of our training the Home Guard in gas on a separate lay-out. I should rather regard it as the duty of each Home Guard commander to attend to the gas training of the Home Guards under his command.

COLONEL F. C. YEO: Mr. Chairman, I should like to make one or two observations on the all-important subject of training. I feel that the progress made during the past year in the equipping and arming of the Home Guard has been more marked than that in the standard of training. I think the main reason is probably the lack of qualified instructors. I feel that during this coming year the man-power situation will become more difficult owing to the calling up, and it will become less easy for members of the Home Guard, both officers and other ranks, to leave their districts, at any rate for longer than a week-end, in order to attend local or Command courses of instruction. The same, I think, applies with equal force to permanent Staff Instructors. The present scale in most cases is one per battalion. I feel that very early steps should be taken to produce a number of young or youngish officers who, if they have not of late been engaged on military training, should be put through a short intensive course in the subjects which to the Home Guard are most important. I should like to suggest that there are available a number of infantry training centres which are now being used as convalescent depots for troops. These infantry training centres have for many years past served as depots for training infantry recruits, and possess facilities for indoor and outdoor training throughout the year. These convalescent soldiers could doubtless be accommodated elsewhere than in infantry training centres where at present the training facilities, such as miniature and 30 yards rifle ranges, lecture rooms, etc., are consequently wasted. I venture to suggest that this is a matter which might receive consideration with a view to the immediate commencement of training of selected officers and N.C.Os. for duty with the Home Guard.

THE LECTURER: Colonel Yeo has drawn attention to a very important matter, and I quite agree with him that we should do everything possible to remedy it

quickly. It is certainly very important that the permanent staff of the Home Guard should be capable of assisting the Home Guard commanders in training the Home Guard. The difficulty hitherto has been to spare instructors of sufficiently high standard from the field forces, but there are signs that these difficulties are now being overcome. As to the use of large infantry training centres as Home Guard centres of instruction, I will bring Colonel Yeo's views to the notice of those concerned.

BRIGADIER-GENERAL SIR EDWARD LE MARCHANT, speaking as the Chairman of a Territorial Association, paid tribute to the way in which the battalion commanders of the Home Guard had co-operated with the Territorial Associations under great difficulties. He raised two points. First, how were the Associations going to account for all the clothing and equipment which had been issued and for which they may be held responsible, because when formed the Home Guard were entirely under Area Commanders, who often were responsible for four or five counties. It was quite impossible, under the system of issue of clothing and equipment to which the Director-General had alluded, to supervise the distribution, and unfortunately the Territorial Associations had had to bear the brunt of trying to trace it later on. The other point was in connection with the more scattered battalions, more particularly in agricultural districts, where it was more difficult for the company commanders to carry out administration than it was where battalions are more concentrated. It would be a great help to company commanders if each had a Quartermaster-Sergeant. If appointed, he would take a great deal of weight off the former's shoulders, which would be of great assistance to company commanders, as it would enable them to give more time to training.

THE LECTURER: First of all, the question of how to deal with the write-off of Home Guard stores lost in the early days. While he was speaking I was looking at an A.C.I. called 1536/1941, and I have very little to add to what that says except this, that we have realized at the War Office for some time that a lot of stores and equipment were issued to the Home Guard in the early days under rush conditions which prevented the more usual precautions being taken. Therefore, while we expect with confidence that every effort will be made to trace the stuff that is missing, we shall bear in mind, when applications for write-offs come up, the conditions under which the issues were made. As to the companies, you know that at the present moment the storeman clerk may be paid for out of the capitation grant, and in a great many cases that man is in fact an ex-N.C.O. It would naturally be very much more desirable if each company had a permanent serving N.C.O. as well as a storeman clerk or in substitution for him, but both for man-power reasons and also from the point of view of getting a sufficiently trained man, I am sorry to say that is not attainable at the present time.

MAJOR ASHWELL suggested that unnecessary trouble and correspondence both to Home Guard officers and to Territorial Army Associations were caused by lack of continuity in appointment of some of the junior grade officers dealing with the Home Guard at Area or District Headquarters. So much in the Home Guard, as in the Territorial Army, depended on personal knowledge of the men being dealt with.

THE LECTURER: I think we realize the trouble the Associations have been having. There are ways to deal with the trouble. One is to give more authority to the Associations to do the work themselves. The other remedy is not to change staff officers, and that is a point which I shall bear in mind. But the third remedy, I think, is just as likely to work, and that is time. As the District Headquarters

settle down and the staff learn their jobs, just as the Home Guard and the Associations have learned their jobs, I think you can safely look for improvement.

THE CHAIRMAN

Before I wind up there is one general comment which I should like to make on the present situation of the Home Guard. The Home Guard, as you all know, was not created by the War Office; it created itself. It was a most astonishing act of patriotism, resourcefulness and organizing ability on the part of the nation as a whole. The War Office could not possibly have done it, but it was done by the country for itself, and that is, I think, one of its most remarkable characteristics as a military force. That we shall never forget in the War Office. In the first place we shall have an undying gratitude towards those who did that organizing for us throughout the country. Men who have distinguished themselves in the Services, men holding high positions in the counties, above all when it came to administration the Territorial Associations of the counties have been invaluable to the Home Guard and are still doing yeoman service to it. The Home Guard, having grown of itself in that way, and being an absolutely essential element in our home defence, and home defence being, of course, the foundation of sound strategy, we want the Home Guard to have all that it really needs as an element in the scheme of home defence. But at this point we are always met by the difficulty to which the Prime Minister was referring in the House of Commons yesterday, the difficulty of allocation between one need and another. He, as no doubt you noticed, pointed out how extraordinarily difficult it is to allocate ahead between theatres, since the present theatres of the war cover the whole world. But we have a further difficulty which has to be remembered in the case of the Home Guard, we have to decide how much at the present stage of the war should be allowed to go into purely static and defensive warfare, knowing that whatever goes into static and defensive effort comes out of the offensive effort to win the war. If we ask the Home Guard to forego this or that, it is not because we would not like to give them everything they require, but because we feel that, provided this island has the margin that will keep it reasonably safe, we must throw everything into the offensive effort that will defeat the enemy. You all know how vitally important it is to increase our offensive strength and not to get the idea that once you have made your own country safe you have won the war. It is a most difficult equation to strike whether there is to be more ammunition for the Home Guard, whether we are to improve its equipment in this way or that. All these questions arise and at every stage we have to weigh conflicting considerations. You all, I know, have an influence in the Home Guard, and I hope you will help to point out that we are trying to concentrate more and more on the offence in different parts of the world, to get out of the defensive and to get the initiative where at present we do not possess it. In that process we must, of course, keep the defensive equipment for this island down to the minimum which security requires. It must never go below what we believe to be safety level, but it may go much lower than we should like if we were able to give everybody what we feel they deserve. I thank Lord Bridgeman for an admirable lecture on the Home Guard. He has been Director for nearly a year. He has been a most admirable successor to the two preceding Directors. One of these is now Chief of Staff to General Wavell in the Far East and the other is G.O.C.-in-C. Northern Command. Directors of the Home Guard, you see, go far. I am sure you are all most grateful, and having said that I declare the meeting closed.

The customary votes of thanks to the Lecturer and Chairman were carried by acclamation.

A CENTURY OF KRUPPS

By FRANK C. BOWEN

TO the Services the interesting part of the history of Krupps of Essen commenced a hundred years ago, for it was in 1842 that Friedrich Krupp produced his first cannon of crucible steel. Before that the family had been prominent in Essen for many years, as merchants and local officials. Friedrich Krupp was born in 1787 and had command of a small fortune, as well as some experience in the steelworks owned by his grandmother. He set out to manufacture cast steel equal to that of the English, and after numerous failures discovered a commercial process in 1816. This he used to make tools, mill rollers and dies for the Prussian mint, and in 1818 he erected his first works in Essen in order to be near the mines. In many ways Friedrich Krupp was a clever man, but hopelessly unstable; he died a bankrupt at the age of 39.

His widow, a very capable business woman, carried on the concern for the benefit of her son Alfred, the future "Munitions King," who was then aged fourteen and had already put in a year at the works. Although handicapped by lack of funds and the constant refusal of the Government to grant him a loan, he contrived to borrow money from a relative and at an early age proved himself exceedingly clever, both at the works and at intrigue. Orthodox advertising was unknown in his day, but he contrived to get his work talked about by a policy of ostentatious and unnecessary secrecy, and he made steady progress. In 1838 he visited England on a false passport and spent six months studying steel manufacture.

The Great Exhibition of 1851 in Hyde Park was really the turning point of his fortunes, for a 43-cwt. steel casting was a popular attraction and army men were interested in the 6-pdr. field gun alongside it. Germany was led to believe that he had secured all the honours of the Exhibition, although actually his awards were on a par with many others. He did, however, obtain permission to submit a 10-in. gun, weighing about 4 tons, for test at Woolwich. The steel gun was separated from the cast-iron jacket by a space of about half an inch for its whole length, except at either end. When tested, both the gun and jacket burst, but Krupp and his supporters complained bitterly that they had been unfairly treated. However he was sufficiently satisfied with his experience at the Great Exhibition to take a stand at every exhibition of its kind. At Paris in 1855 he exhibited a 5-ton casting and offered to

produce one of 12½ tons. He also exhibited a steel replica of the new French field gun, but 2 cwt. lighter. This impressed Napoleon III very greatly; Krupp was decorated with the Legion of Honour and the French army ordered three hundred guns. But this was soon cancelled, ostensibly for lack of funds, but really on account of the outcry in France, fomented by the Schneider-Creusot interests. An order from Egypt was carried out, and in 1859 the Prussian Government placed its first order for seventy-two solid-drawn 6-pdrs. The latter was largely due to the personal interest of the Prince Regent—later the Kaiser Wilhelm I—and he personally increased it to three hundred guns. After that many orders came from abroad, including Britain.

In 1862 the wedge breech-closing mechanism, which was a feature of Krupp guns for many years, was invented; it was an improvement on other methods but it added greatly to the weight of the gun and gave trouble if the lubrication were careless. Success seemed to be so far assured that Krupp very shrewdly acquired his own sources of raw material. There was still a strong antipathy to his steel guns in Prussia, and when the Prussian navy was being hurriedly collected against Denmark he was persuaded to supply 6.7-in. cast-iron breech loaders which were not satisfactory. After the war, largely owing to the friendship with Bismarck which he had carefully fostered, he got large orders for naval and coast defence guns, principally 6.7's and 8.2's; but these were of cast steel with the wedge breech and were most satisfactory. When the tension between Austria and Prussia was growing he got orders from both sides but, possibly on account of their hurried construction, a number of Krupp guns burst and for a time his system was under a cloud. Nevertheless Bismarck and King Wilhelm continued to support him, and the critics were answered by his taking back the faulty guns and giving in exchange the latest type of built-up gun, in which a white-hot outer tube was shrunk on to a cold inner one. A further order for seven hundred guns, and a very large order from Russia, compensated for any disappointment.

In 1867 and 1868 Krupp guns were tested against the latest British type. The first test was in competition with the Armstrong gun, then attracting a great deal of attention, and the Krupps failed completely. They scarcely damaged the armour-plate targets, for which Krupp blamed the quick-burning Prussian powder, and the Berlin Admiralty proposed to acquire forty-one Armstrongs for three ironclads under construction. Krupp again turned to King Wilhelm to secure further tests under conditions more favourable to him, but the King had actually ordered Krupp guns for the navy before these tests were carried out. The tests were held at the Tegel grounds near Berlin between Krupp breech-

loaders and Woolwich muzzle-loaders, and on that occasion there was no doubt of the Krupp's superiority.

At the outbreak of the war with France Krupp offered to present Prussia with a free gift of artillery, but in spite of the King's friendship the offer was coldly declined, as was also his offer to make very heavy guns for the bombardment of Paris. The performance of Krupp guns in the war made a great impression on the German public and also in foreign countries. There came a regular flood of orders, but in spite of this and the fact that his pay-roll had gone up to 10,000 men, he was constantly in serious financial difficulties.

In addition to the army Krupp was busy with naval orders. Iron-clads of the "Friedrich der Grosse" type were designed in imitation of H.M.S. "Monarch," and Krupp supplied guns of strikingly high velocity but of comparatively small calibre, the 10.2 in. (22-ton) in the turrets and 6.7 and 3.4 in. as a secondary armament. He completely altered his system of gun manufacture and started to make steel armour-piercing shells by hammering and heat treatment. These were undoubtedly superior to any of their contemporaries. His guns were longer than most other breech-loaders, the inner tubes being made in two lengths, but always being thick and carrying the breech mechanism. His cylindro-prismatic breech wedge with Broadwell ring was also strikingly successful. In 1875 he introduced his mantle-ring gun with a jacket shrunk over the breech end and hoops shrunk on outside the jacket, which proved to have immense strength on a comparatively light weight.

In spite of these successes Krupp still had many enemies in official circles. These found their opportunity when a built-up Krupp gun on board the gunnery training ship "Renown," purchased from the Royal Navy in 1870, blew up and examination showed that many guns of similar type were faulty. At that time the German navy was passing through a difficult stage on account of the bitter enmity of the army, whose officers did not hesitate to comment on the inglorious role of the fleet during the war with France. The Admiralty became seriously alarmed at the disclosures and General von Stosch, then Minister of Marine, demanded that Krupp should guarantee his guns for a minimum life of five hundred rounds. Krupp angrily declined and started a very bitter correspondence. Von Stosch insisted, so Krupp sent his right-hand man to solicit Bismarck's aid and at the same time threatened the Ministry that he would sell his works and retire. He won his point in the matter of guaranteed life, but had to give a pledge to improve the forging and to provide better supervision. He also in characteristic fashion met the claims of his enemy Gruson that he could make iron armour plate better and more cheaply than Krupp. Gruson had been

a bitter enemy ever since, as a minor railway official, he had rejected a number of Krupp axles as faulty. He was now a serious rival in the iron and steel business. Krupp staged a public test of plates made on his system against those of the Gruson type, but as he manufactured them both it was not altogether surprising that the Gruson system failed lamentably. He had his agents all over the world, and they made the very most of tests of this kind. In attacking the British market in 1879 he personally circularised all members of Parliament. When the appointment of Emile Bertin as Naval Adviser to Japan led to their navy purchasing Schneider guns, Krupp made a personal ally of Li Hung Chang and secured valuable orders from the Chinese services and railways. Another undoubted success, for which he got a good deal of the credit, was the introduction of the slow burning brown prismatic or cocoa powder which soon supplanted black powder in all navies, although its stowage on shipboard led to many accidents.

His son, Friedrich Alfred Krupp, entered the business at the age of eighteen in 1882; but he was of quite a different nature to his father, who in his latter days alienated nearly all his friends and drove most of his best men to rival firms by his methods. People began to say that he was neither a good engineer nor inventor but was only clever at adapting other people's ideas. There is no doubt that he was a wonderful salesman, although his methods were open to a good deal of criticism even at that period of lax commercial morality.

Alfred Krupp died of heart failure at the age of 75 in 1887, leaving a will by which the works were entailed in trust for his heir and descendants. Friedrich was delicate and suffered from asthma from childhood. He had a gift for science, which the old man distrusted and held in contempt, and until he obtained control he acted principally as representative of the firm in foreign ports and as a buffer between the Technical Board, which included brilliant men who wanted to make progress, and the conservative old autocrat.

Before he died Alfred Krupp had received confidential information—a direction in which he certainly possessed genius—that the young Prince Wilhelm, afterwards Wilhelm II, had great dreams of sea power; he subsidized propaganda, on a small scale at first, well in advance. Friedrich followed the same policy all through his career. At the outset he began to make improvements in the works and methods, and these greatly attracted Wilhelm II as soon as he came to the throne, starting a warm friendship between the two men. His father had not been really interested in steel armour but Friedrich started to experiment with it, cutting into the business of Gruson of Magdeburg who had that field practically to himself and who retaliated by making guns. Krupp made

a mistake in condemning the long recoil cylinder for field guns, which was first put forward by one of his employees, but that was his only real mistake for some years. As soon as Nobel invented his smokeless powder, Krupp acquired the German rights, and in 1891 he began to make guns from Harvey nickel steel alloy. The Gruson competition was expected to give him trouble, but at the 1892 general meeting of that Company it was revealed that Krupp held the majority of the shares, which he had been buying secretly for nearly four years. The Gruson Company was absorbed in the following year and its ordnance works transferred to Essen.

Krupps had started to make steel armour at Essen in 1891, although their process was not perfected. In 1893 it was patented and proved infinitely superior to the best Harvey nickel. The German navy was to have the first call on all supplies, after which any other navy could manufacture it on payment of a heavy licence fee and a royalty of about £9 a ton. The first plates were made by enriching the carbon content of the surface of nickel steel plate. This was soon improved; the new method replaced the crystalline nature of the back of a Harvey plate, which made it insufficiently tough to resist the racking effect of armour-piercing projectiles, by a tough consistency which prevented cracking and greatly reduced penetration. Nickel and chrome were used in producing this plate, which had its face raised to a very high temperature and the remainder of the plate to a far lower one. With water hardening and high pressure it obtained a wonderful surface hardening and it was generally granted a 30 per cent. superiority over Harvey nickel plates of medium thickness, although the very thin and the very thick plates did not make such a good showing. Having proved the value of his armour, Krupp carefully worked up its competition with the gun and brought out a new chrome steel armour-piercing shell, followed by a capped shell with an explosive nose to burst inside the armour.

The next move was in consequence of Krupp having received advance information of the Government's plans for the Navy Act of 1898, which made it seem worth while to go in for the building of ships as well as their arming and armouring. At Kiel there was a shipyard, in an excellent position and with a good reputation, which was then passing through a very slack period. It had been founded immediately after Kiel had been taken from Denmark as the North German Yard, but in 1881 its name had been changed to the Germania Yard. It had built a few merchant ships but most of its business had been in the construction of torpedo craft, cruisers and naval small craft. Friedrich Krupp took it on a twenty-five-year lease, which allowed him to make any alterations that he considered necessary and gave him the option of purchasing the

business at his convenience. The Admiralty let him have the adjoining site at a very low price, giving him a total waterfront of 1,100 yards, and he immediately started great improvements. As the first German ship-building establishment to produce its own guns and armour, and the first to have covered-in slips, it had great advantages and Krupps spent huge sums in extending and improving it. It was also a wonderful asset to the Kaiser's naval plans, and in 1902 Krupp exercised his option to take it over completely. The shareholders complained bitterly that they had been shamefully robbed, but the case never came into court.

In 1901 the firm had to face accusations which were far more serious than those which had preceded them. It was shown in the Reichstag that Krupps had reduced the price of armour to the American Navy and increased it to Germany so that, after paying royalties to both Krupp and Harvey, the Americans were paying 400 marks per ton less than the Germans. It was an open secret that Tirpitz supplied the material to the attackers and it was generally believed that Krupp's rival, Thyssen, was behind him. The Reichstag proposed the establishment of a national armour works and things looked serious; but the accusations did not end with Krupp, and the German Admiralty was forced to admit that its obsolete and bureaucratic system of accountancy made it quite impossible to check actual costs.

Before the excitement had died down, Friedrich Krupp died suddenly in November, 1902. The cause was published as heart failure; but a scandalous case was coming before the courts and, in spite of the Kaiser's eulogistic speech at the funeral, most Germans believed that he had committed suicide, the remainder maintaining that he was not dead but had fled the country. His will left directions for the future of the business which was to go to his daughter Bertha, to be managed as a joint stock company with a board of six and not to be turned into a limited liability concern for twenty-five years. His widow was to carry on the control during the daughter's childhood. Frau Krupp proved herself very shrewd, and her first action was to make successful efforts to improve the feeling between the firm and its workmen.

In Germany's war preparations, both on land and sea, Krupps took a principal part; and it was the Kaiser's personal order that they should always be given preference, although after the armour scandal other firms offered to supply Krupp armour, of identical quality, at 1,550 marks against Krupps' price of 2,320. Although there might have been saving of money on individual sections, Germany's plans could not go forward without Krupps' huge organization and they kept well in the forefront of technical development. The Russo-Japanese War had been fought at increased ranges, and Krupps started a new set of experiments to produce

longer range guns and new projectiles. They launched the first German submarine—"U.I,"—in 1906, but it proved a failure and was replaced by a second ship with the same number to conceal the incident. They carried out submarine experiments on behalf of the German Admiralty, produced an anti-aircraft gun as early as 1908, experimented with nickel-tungsten steel to replace nickel-chrome for armour and evolved the new type of armour-piercing shell which attracted such attention at Jutland. In 1910 they started experiments with a light quick-firing gun for submarines, fitted on a telescopic mounting to disappear into a watertight chamber when the boat dived.

Their foreign business also steadily increased. In 1912 it was officially announced that since Krupps had started the making of cannon they had turned out 53,000; 26,000 of these had been taken by the German Services and 27,000 by no less than fifty-two other countries. At about the same time it came out, as a result of the Balkan War, that Krupp field guns which had been supplied to Turkey cost about 14,000 marks each but had been invoiced at 165,000 marks. Another scandal in connection with the firm occurred in 1913, when it was proved that they were getting secret information from the Government departments—the army more than the navy—concerning the placing of contracts, and that a large number of civil servants and officers were in their pay. It was stated that the navy was still paying the firm 40 per cent. more for armour than could be obtained by their competitors. A few months before the outbreak of war the Germans secured all the closely guarded secrets of French gun manufacture through Krupps' purchase of the Russian Putiloff Works which were the holders of Schneider-Creusot licences. The announcement caused great excitement in France, but it was probably many years late and French ideas had no influence in causing Krupps to abandon the crucible process for gun forgings in 1914 and to introduce the electric process instead.

During the late war Krupps' various works and establishments were naturally working at high pressure. The profits were large, but the organization which had been built up for so many years was justified in its purpose. The Germania Yard was used principally for destroyers and submarines; the gun department turned out an average of 114 guns a day; experiments to convert a long-range naval gun to bombard Dunkirk led quite accidentally to the "Big Bertha" which bombarded Paris at a range of 75 miles. After Jutland the Kaiser telegraphed that he was convinced that the German success was due to them, more especially to their shells, and concluded—"the battle is, therefore, also a day of triumph for the Krupp Works." At the time of the Armistice their various establishments were employing 165,000 workpeople.

Immediately after the Armistice, Krupps were the particular target of revolutionary strikes. These were very carefully handled by inciting the long service personnel against the newcomers, at the same time pointing out that they would lose their employment and all the pension funds if the firm were forced into bankruptcy. The Treaty of Versailles made a special point of Krupps, limiting it to four guns per annum and such armour plate as was required by the German Navy on its peace footing. They promptly transferred their research departments to Holland, employing various agents. The Germania technicians went to Piet Smit's Rotterdam shipyard, and research work into submarine construction continued. A big interest was acquired in the Bofors armament works in Sweden.

In 1928 the Social Democratic Government gave assistance to 100,000 locked-out Krupp workmen, which caused the firm to support Hitler in his rise to power, although their advances were received with suspicion. It was not until 1934 that Krupp von Bohlen, the head of the firm who had married Alfred Krupp's daughter Bertha, was appointed Hitler's "Leader of Economy" in charge of the first seven groups of the new organization. In the following year the firm spent 40,000,000 marks on new plant, more than in any year during the late war, and increased its staff. A dividend of 4 per cent., the first since the war, was declared in 1936, but the entire capital was still held by the Krupp family.

The group continued to expand steadily, carrying on its work with the greatest secrecy. The works were visited by both Hitler and Mussolini, but they continued to be managed without the rigorous control of other establishments. The Germania Yard, which had been kept going by the building of merchant ships and luxury yachts for America, was one of the first establishments to lay down submarines and big destroyers secretly, against the stipulations of the Treaty of Versailles, and when that agreement was finally repudiated all Krupps' departments were ready to work at high pressure on the rearmament programme.

NAVAL PERSONNEL IN THE XVIIITH CENTURY

By LIEUTENANT R. F. COLVILE, D.S.C., R.N.

IN reviewing life in the Navy during any period it is essential to compare it with life ashore at the same period, for paradise is relative to hell, and the attraction of one way of life is simply relative to the alternatives which an individual is offered. One cannot understand such an attraction, therefore, without some idea of how these attractions were regarded. It is unsound, for instance, to judge the deterrent effect of brutality by the standards of this more humane age. Ideas which are now common property were not then necessarily more than half conceived in the brains of an intellectual minority. Present perception of their mistakes should not lead us into the injustice of considering as deliberately evil policies which were shaped in ignorance.

In the year 1750 A.D. England was chiefly agricultural, ruled by a select oligarchy of country gentlemen, the landlords. The villages had until then been self-sufficient communities, but with the rapid improvement of roads they were becoming merged into a larger, more flexible system. Inevitably, as communication between villages improved and travel increased, a more rapid distribution of ideas, and their modifications to suit special cases, took place. The villagers began to grow aware of worlds beyond their village. There was, maybe, something beyond the horizon to which hitherto their vision had been limited. Communications were turning England from its comparatively static state into a dynamic one.

The first reaction to this spread of ideas came, naturally enough, from the landlord class. Agriculture being their métier, they learnt with interest of the new system of enclosing land and its subsequent improvement in yield. They watched "Turnip" Townshend's importation of continental methods and crops with professional interest. They repeated his experiments. Small yeomen who were tenants and in their debt were foreclosed. The small holdings of others were bought up. The land thus obtained they farmed themselves. The dispossessed wandered aimlessly, with a leisure thrust upon them that they did not know how to deal with, and for which there was no immediate cure. Between 1760 and 1801, 3,180,871 acres of common field and waste land were thus enclosed.

The result, of course, was that mental energy was more active. Roused from the even tenor of their contented way the dispossessed became

more susceptible to ideas. With increased "crossing of thought" mental activity began to move in diverse lines; some resulted in mechanical inventions, others in fresh philosophies, others in new religious movements; revolution was in her cradle.

The sea being then the only route joining the Continent to Great Britain, it was only natural that it was in the seaports that these ideas first made their presence felt. This history of conditions at sea between 1750 and 1797 is a foretaste of the conditions in the country itself between 1800 and 1832. Because of their freshness the ideas were perhaps more indigestible, and because in the Navy itself during this time there was considerable expansion and a considerable mixture of classes and kinds of men, the intensity of the indigestion depended to a large extent on the particular mixture in each ship. It was analogous to fresh polar air meeting tropical air and forming a front. Squalls, drizzles and in places thunderstorms of some severity took place. When it had passed to the country beyond, the isobaric gradient was gentler and a similar but less violent state of affairs took place.

The period under review is therefore one of modification and transition from the rigid framework which suited the static minded Augustan age to a more flexible framework which would not be unduly strained in bending to the progressive ideas of to-day. In it we should expect to see reflected the changing relationship between the Navy and the State, and internally the changing relationship between officers and men. We should expect to see the former shadowed in Admiralty recognition, rather belated perhaps, that the seaman was also human and might be permitted certain privileges, and the seaman in return give some of his labour willingly instead of being driven. The latter should be more apparent in the alteration of the spirit of the Navy, manifested in a demand from the seamen that they should have officers of an officer-like quality, and an almost personal pride in the officers that were so; while the officers might be expected to take a growing interest in their subordinates, and begin to consider the Service as a profession rather than as a sinecure with a social title.

THE OFFICERS

There were in the year 1750 three main methods of recruiting officers for the Navy. One was obsolescent and seldom produced any large number of junior officers; one was new and regarded as rather experimental, and the third produced the great bulk of the officers.

King's Letter Boys had been discontinued since 1721. They were young men who had the King's patronage behind them, or sufficient influence to procure the appearance of that patronage. It was therefore

a restricted entry but of high social standing, and it is not surprising that most of its members attained considerable seniority.¹

The second method was to receive preliminary training at the Naval Academy at Portsmouth. This had been founded by Torrington of Passaro in 1730. The academy appears to have been mainly instrumental in teaching the young officer rudimentary spherical trigonometry and other navigational technicalities. The sextant, it is interesting to note, was just coming in. In many cases boys went there after they had received practical experience in seamanship already, and indeed many of them were rated Midshipman.

The third and more usual method was entering as a Captain's or officer's servant.² Most officers' sons who were destined to follow in their fathers' footsteps began in this manner. The traditional younger son was frequently placed with some Captain who was under the patronage of his family. They appear to have lived with the Midshipmen on the Orlop³ deck, and graduated when old enough, through the rating of O.D. to A.B. and thence to Midshipman, but still living apart from the Lower Deck. Sometimes, however, whilst borne on the Ship's books, they lived ashore.

The Orlop mess appears to have been a mixed one. Besides the various ages and stages of officers under training, there lived in it the seaman who had been rated Midshipman for pure seamanlike merit and behaviour, and also some of the Warrant Officers. Now and again trouble was caused in the mess by conflict between the "Tarpaulins" and the "Gentlemen."

From Midshipman onwards the young officer depended partly, but not entirely, on interest with the Admiralty.⁴ It was, of course, always probable that a likely youngster might 'catch the eye of an observant Captain, and if the Captain happened to do well, as a follower of his the youngster might acquire influence. But before he could be promoted to Lieutenant he had to pass an examination, at which he was examined in Seamanship and Navigation and presented his certificates. Before becoming a Lieutenant it was usual for the officer to serve as a Master's Mate, when he lived in the Gunroom. He was supposed to have six years' seetime in, but as has already been seen this did not

¹ Rodney was the last of these. (*Sea Kings of Great Britain*, Callender, p. 34.)

² Gardner, Keppel, Nelson, Byng, Raigersfield, for example.

³ Gardner actually lived in the Wardroom and Gunroom when in these positions, but Raigersfield messed in the "Orlop" deck with "a mate, four grown-up midshipmen, a youngster, who had been at sea, and a blackguard boy."

⁴ It is clear that interest was not the only method of obtaining promotion. Gardner was told that his certificates were good enough to obtain promotion to Lieutenant "without interest." Acting on this hint, he sent his papers to Spencer and was immediately elevated to the desired rank. (*Recollections*, p. 174.)

always entail going to sea. It is clear that Lieutenants were of unequal sea experience and with very diverse systems of training behind them. Some came from schools such as Harrow⁵ or Westminster⁶, and had some smattering of the classical education doled out to them at that time. Others had little more than the general education afforded by their own inclination and the experience with which they had met at sea. It was not uncommon for Master's Mates waiting for their commission to obtain further experience by sailing in merchant vessels.⁷ There were also Lieutenants of almost no experience and less knowledge of the sea who owed their promotion almost entirely to influence, frequently political. To be worth votes was always a sound method of obtaining fairly rapid promotion.⁸ This political tincture to command in the service was responsible for a great many of its evils. It led officers into taking a far greater interest in the political intrigues of the time than in the welfare of their men or the efficiency of their Service. It led to the promotion of young men with no training for command, but with potential political influence. Indeed, it never occurred to many of these officers that commanding also entailed responsibility for those that they commanded. Thus we see a Post Captain at the age of twenty-three with a brilliant fighting record, yet possessed of so little idea of what his crew were capable of or how they should be employed that seven years later he was being court-martialled and dismissed the Service for ill-treatment and oppression.⁹ It is clear also that many Post-Captains knew nothing about their job as seamen. Even in 1796 and later St. Vincent was complaining of them, and when compared with the gloomy years of Lestock, Mathews, Keppel and Benbow, St. Vincent was remarkably well off.

Towards the end of wars the useless officers usually found themselves weeded out and the commands given to the more competent, but

⁵ Rodney was one.

⁶ Keppel, Howe, Hothams, Home, Popham.

⁷ Nelson voyaged to the East Indies and then went on to an Arctic expedition at the advice of Suckling. Parker in his testimony states "Having a desire to improve myself by getting a knowledge of the Merchant Service, I applied and through the interest . . . obtained my discharge. I then went as second mate of a ship called "Arno of Exeter."

⁸ It is almost possible to perceive which party was in power by the officers commanding the fleets and the Sea Lords at the Admiralty. Palliser and Keppel, for instance, alternated as Sea Lords with the Whigs and Tories. Barrington, Howe and Hyde Parker all refused to serve under Sandwich. Rodney was relieved immediately after he had won the Battle of the Saints, because the ministry at home had fallen.

⁹ Hamilton, who recaptured the "Hermione," was a Post-Captain at a very early age and by the time he was thirty had been court-martialled and dismissed the Service for cruelty and oppression.

with peace there came, usually, a change of ministry, and with it officers who regarded the Captain's job as a sinecure and their instructions "to repair on board from time to time" in a highly elastic manner. In addition, the conditions of sea life even for officers was an unnatural and restricted existence.¹⁰ Eccentricities, quick temper, and strange obsessions grew in them, resulting inevitably in loss of proportion, impossible orders, addiction to drink or religion, and culminating occasionally in complete insanity.

There was then no conformity or considered policy in the officering of the Service. Their training was as diverse as their parentage and temperament, and their outlooks on life differed accordingly. Most of them, however, were uncritical and accepted life as it came, worrying over injustice only when it directly concerned them, and behaving generally in exactly the same way as their superiors had behaved to them. It must have been hard for a seaman accustomed to the routine of one ship and the wishes of one Captain and First Lieutenant, to transfer to another.¹¹ The great advantage which officers did have over seamen and the sense of injustice which remained when they were ignored¹² was that their job was a more or less definite one. When not serving they were, once commissioned, entitled to receive half-pay or employ themselves meanwhile as they thought fit. Indeed there never seems to have been any dearth of Commissioned Officers of sorts, and although some of them were particular about where and with whom they served, the almost unfailing regularity with which such protests were allowed suggest that there was little difficulty in finding officers willing to go anywhere and do anything.

THE LOWER DECK

The normal peace establishment of the Royal Navy was one-sixth of its war establishment, and in peace it seems to have generally been possible to man it with volunteers. With the outbreak of war the demand inevitably increased, and there was naturally greater competition

¹⁰ Nelson was on board for twenty-seven months with three exceptions of less than an hour, and if the Admiral could not obtain leave no one else was likely to do so.

¹¹ After the Mutiny at the Nore, Duncan proposed that the internal organization of the ship's company should be standardized. Local Commanders-in-chief (e.g., Rodney) had temporarily done so on their stations with considerable success.

¹² Parker in his testimony seems to labour under a deep sense of injustice in being refused permission by Captain Berkely through Lieutenant Richardson to transfer from "Assurance" to "Sphynx." (*Spencer Papers*, p. 164.) It also suggests, I think, that Richard Parker had well above the average capabilities. He may have been another example of insanity arising from the peculiar conditions of life at sea.

between private merchants and the State for the services of seamen. The chief problem throughout was that the prime seamen were fewer than were required by the swollen needs of war and trade.¹³ The merchants met the increased competition by raising the pay, the Admiralty by various schemes of bounty, quotas and impressment. The establishment of seamen in a normal line-of-battle ship, besides its Warrant and Petty Officers, was one-third prime seamen, one-third ordinary seamen, and one-third landsmen. They had no fixed period of service, though it could usually be assumed as for the duration of the war. There are several cases on record when seamen, after one three-year foreign commission, were immediately sent abroad again for another.

Usually at the beginning of a war bounties were immediately given to all seamen who would join the Service. If seamen were not forthcoming in sufficient numbers the bounty was raised and the press-gang got to work. The bounties applied to all three classes of seamen; the press-gang to prime seamen only. It seems to have been the custom, in any case, to give the pressed seamen the bounty as well, so that until they believed the peak in bounties was reached, there was little inducement for them to enter the Service. Generally, if they went to sea at all, they preferred to take the risk of impressment and work merchant ships. Ordinary Seamen were frequently half-trained landsmen, or small boatmen, and both classes were recruited largely by bounties. Later on it became customary on some assizes for the presiding magistrate to give convicted felons the choice of gaol or service in the Navy. Others were bankrupts who chose, by accepting the bounty, to escape or avoid the debtors' prison.¹⁴

But there was also another class of men: the real backbone of the Navy. These volunteered to serve as landsmen or ordinary seamen, because of their personal attachment to the officers of a particular ship. All Captains were largely responsible for the manning of their own ships, though the Port Admirals did their best to assist them. Volunteers of this sort were known as "followers"—the term included officers—and in many cases they moved from one ship to another with the Captain. Thus the Hood family always had a number, Pakenham had his Irishmen,

¹³ The actual figures of increase according to Hannay are: In 1776, 8,933 men; by 1st January, 1778, 62,719; and 1st January, 1783, 107,446. (Hannay, p. 219.)

¹⁴ Parker—ringleader of the Mutiny at the Nore—in his testimony declared: "In December last I drew upon my brother-in-law for £23 in favour of John Duff of Edinburgh, which not being paid I was arrested and put into gaol at Edinburgh, where I remained about three weeks, when I sent to the Regulating Officer and agreed to enter the Navy for 20 guineas." (*Spencer Papers*, p. 162.)

the city of Scarborough gave a special bounty to seamen who would follow Palliser.

When these methods failed to produce sufficient manpower the Quota was resorted to. The Quota Act, passed in 1795, called upon county authorities to provide Landsmen and Ordinary Seamen in certain quantities. Local authorities assisted the county by finding in the Act a means to rid themselves of vagrants and other undesirable characters. Anyone down on his luck or likely to be thrown temporarily on the parish for support might find himself in a ship of the line.

From this it can be seen that the Lower Deck was even more of a mixture of types and temperaments than the officers. Their training, like that of the junior officers, depended mainly on their superiors. Many of the Landsmen were temperamentally and physically incapable of being seamen and so were used for the less seamanlike duties of the ship. There were Captains who, with the help of the divisional system, endeavoured to organize direct relationship between officers and men, and these, when successful, did probably train a number of able agricultural labourers into able seamen. It was usual during the course of a commission to rate up both Landsmen and Ordinary Seamen to a higher rating; so there was always the prospect of advancement, and training of sorts must have been carried out.

In 1772, largely through the work of Admiral Sir George Pocock,¹⁵ the Marine Society was incorporated by Act of Parliament and later started a training ship scheme—the "Worcester"—the purpose of which was to provide and equip Landsmen volunteers. It is of interest as being the forerunner of our present Boys Training Establishment, and even then supplied each year some twenty Landsmen of spirit and knowledge.¹⁶

With the American war in full swing the difficulties of manning reached their peak. The loss of thousands of American seamen aggravated the problem. The provisions of the Navigation laws, which had limited the number of foreigners who could serve in a British ship to one-fourth of the crew, had been suspended as early as 1756. Many ships were therefore partly made up with foreigners. After two years' service they were entitled, and indeed encouraged, to take out papers of naturalization. They could then be impressed without fear of neutral complications.

¹⁵ C.-in-C. East Indies (1757-59) and later commanding at the Capture of Havanna. His epitaph in Westminster Abbey includes most of his achievements, but leaves out any mention of, perhaps, his most important activity, the Marine Society.

¹⁶ The Marine Society actually started in 1756.

As has already been noted, the competition between the Navy and the Merchant Service was never acute during peace, and indeed it is probable that the Navy was manned by a larger proportion of good able seamen than its alleged one-third. But when war came this was only one-sixth of the Navy's requirements. There was no standing Navy, so that to make up the remaining five-sixths or, being optimistic, two-thirds, the Merchant Service had to be robbed. These seamen then found themselves alongside the sweepings of the countryside and packed into hastily commissioned ships,¹⁷ built of green timber,¹⁸ probably already rotten, badly conditioned, and overrun with rats. No wonder they wished to get back to their own trim ships or, better still, a privateer.

Their pay¹⁹ had been unchanged since the days of the Commonwealth. The wages of A.B.'s had then been 25 shillings a month. They still were. By William III's time Merchant seamen were in war-time getting 50 shillings a month, and in the period under review it rose to 80 shillings and in extreme cases—the North Sea Coal Trade, for instance—to double that. In addition, there were chances of prize money. A crack frigate on a lucrative station was always a popular vessel, but the seamen only received an equal share to that of the Landsmen and Ordinary Seamen, and more was to be gained in any case from most privateers. Any warship in sight during an action was always entitled to a rake off if one of H.M. Ships did the capturing.

Because of the uncertainty of their length of service and the frequency with which Able Seamen deserted, leave was rarely given. When vessels came in to pay off and be docked their crews were usually crowded into guardships at their Home Ports, and even then leave was not given, though their wives were allowed to come off to them and sleep in a hammock slung alongside them.²⁰ Pay could only be

¹⁷ So badly off were the Navy in 1781 that Parker's North Sea convoy of seven ships of the line included one 50-gun, one 44-gun and the "Princess Amelia"—nominally 80-gun, but "so crazy with age that it had been found necessary to reduce her armament."

¹⁸ Green timber was a constant thorn in the flesh of the Sandwich administration. It was largely inherited from the policy of his predecessors.

¹⁹ Seamen were actually paid in lunar months, whilst the Merchant Service were paid in calendar ones; figures given, however, have been converted to calendar months. Hannay gives their pay as 23s. a lunar month. Tomlinson gives it at 22s. 6d. a lunar month, but that allows for various compulsory deductions; 24s. is his full amount, but this may allow for the victualling allowance paid sometimes for the 14 oz. pound. This is equivalent to 26s. a full month. In times of peace Merchant Service seamen got 27s. Tomlinson gives 30s. as the equivalent value to their pay when paid in King Charles II's reign.

²⁰ Thus Smollet and Marryat and the origin of the term "Show a leg." Also Hannay, p. 358.

obtained at Home Ports or the Admiralty Offices in London. Getting it at all depended partly upon the Captain having written up the book correctly; partly on the accounts departments at the Navy Board having certified them as correct, and sent them back; partly on there being an energetic commissioner at the Home Port;²¹ and, finally, on there being enough money available in the Port to pay with.²²

Until vessels were paid off seamen were kept in at least six months credit with the Crown. On first joining they were, it is true, entitled to an advance of two months' pay to buy slops with, but this was small consolation to the seaman's wife and family who had perforce to live on his bounty and expectations for at least six months. Expectations were, of course, a costly way of living: loans required a fat interest. Indeed, the seaman's trade to any thinking person in the XVIIITH Century must have seemed a mug's game. If, during the course of a war, a seaman wished to see his home at all—and wars were more common than peace in those days—it had to be by stealth. Once on board a man-of-war he was gone until, either the Service had no further use for his dead or maimed body,²³ and the body had in the later stages to be pretty well maimed at that, or the war came to an end. If not on board a man-of-war he was liable to be rudely impressed. He might, in his own opinion, be exempt and even have a certificate to confirm his opinion, but the wheels of official bureaucracy were of very low revolution in such matters, and the "state the case" man might well find himself in the West Indies or the Mediterranean with no alternative but to stay where he was. The safest place was in a foreign merchant ship at sea, and even that could not be guaranteed. The Dutch nation especially gained a number of naturalized seamen during a war, and after the States had won their independence American seamen also frequently had questionable antecedents. Such seamen were not always allowed to remain safe under the cloak of their new nationality.

Pay was the seaman's greatest grouse. Everything considered, victuals were probably as good as in the Merchant Service, and in spite of the 14-oz. pound infinitely better than in the Army.²⁴ Compared

²¹ "Mutiny in the Royal Navy," p. 11. Most of the mutinies of this time which were not over brutal treatment and oppression were caused by one of the pay regulations not having been fulfilled.

²² Nelson writes to Locke in 1783: "My time, ever since I arrived in town, has been taken up in attempting to get the wages due to my good fellows, for various ships they have served in the war." (*The Floating Republic*, p. 246.)

²³ Thus Tomlinson comments that he believes many deaths were caused by keeping the sick on board their ships instead of sending them to hospitals for fear of desertion. (Tomlinson, p. 188.)

²⁴ In 1779, General Grant wrote to Admiral Barrington at St. Lucia: "Your reduced allowance is equal to our complete ration; and the seamen are used to a reduction of 1s 3d."

with present-day standards they were, of course, poor ; but then there was no refrigerating plant to keep things fresh, nor had canning yet entered into the world of food preservation. Salt and smoke were the common methods of preserving. Captains carried their own live stock but, except clandestinely, this seldom found its way further forward than the Gunroom, and although one or two eccentrics liked fresh rat pie, their messmates discouraged the taste.

From these varied and dubious resources then was the Navy made. Here and there was a good officer or rating keen on his job, loving the sea perhaps for its own sake, and even for its hardship. Here and there, usually among the officers, was some ambitious fellow seeking the bubble reputation in the cannon's mouth. But these were not the majority. From the top downwards there was among the officers with any influence more thought of serving their political party than their country. Even such celebrities as Keppel, Howe, Barrington, with their followers, declined to serve, hoping thereby to overthrow the Sandwich administration ; the loss of the West Indies and the defeat of our fleets by foreign nations appear to have meant nothing to them. War was part of the political game. It is scarcely surprising, therefore, that they showed little interest in the internal welfare of the Navy, except when from time to time it might serve as a weapon for party politics. The seamen were there mainly against their will, held there by force when they were held at all. Desertions were frequent and the cost of impressing them in the first place and apprehending them afterwards was quite prohibitive. For the most part they had to be driven rather than led, and inevitably the tendency was to drive them forcibly : " starting " and flogging to preserve discipline were common practices ; nor was the principle resented by the Lower Deck ; indeed, until the Quota system began to make itself felt by introducing a leaven of semi-education it seemed the natural order of things. But that such driving should have been the rule gives some idea of what terms officers and men were on. Few officers seem to have respected their men, and few possessed their entire confidence.

Yet in spite of this there was in the best ships a tremendous loyalty to the ship, and to the Captain.²⁵ It is probable that these ships were commissioned mainly with volunteers, but it cannot have always been so. Howe, who, perhaps, was humane rather because he perceived that it gave him better results than from any real feeling about the men, always commanded considerable personal allegiance ; and except in isolated

²⁵ Time and again the crew protest their loyalty to the Captain, and in some cases the Lower Deck subscribed to give a departing Captain a small piece of presentation plate. (*The Floating Republic*, p. 64.)

cases there was very little personal rancour against the officers in the mutinies of 1797.

In fact, the time, place and manner in which these mutinies were conducted probably saved Europe from Napoleon's capacious maw. They brought about better conditions, and the need for the press-gang was thereby lessened. But, even so, they were dangerous enough. To leave Duncan with two ships to watch the Texel, to leave the French ports unblockaded, to leave officers in doubt as to whether they would still be commanding to-morrow, was scarcely conducive to the execution of the strategical plans of the Admiralty or the tactics of the Commanders-in-Chief.

The mutinies demonstrated the difficulties with which recruitment was faced, but they were very largely the result of the system of recruitment. Because conditions were so bad, seamen would not come willingly in, and because of that they had to be compelled; because many pressed men deserted as soon as they had the chance, more had to be compelled. While seamen and volunteers only had to be considered, things were not quite so bad. Seamen cooped up for years on end in a ship had initially little chance of being led astray by revolutionary ideas, and when they did go ashore they were too intent imbibing the stimulation of alcohol to mind much whether society was based on social contract or divine choice. But with the introduction of the Quota system, it was different. The local J.P.s, anxious to get rid of their radically minded theorists, saw in the Quota a means designed by a benign Providence especially for this end. Peace was in their minds more important than justice. The village schoolmaster with a little knowledge, the opposition corner in the ale house, all those who showed tendencies to think for themselves or along some new line of thought, for all such the Quota system seemed designed—away to sea with them; and away to sea they went! The impact which conditions at sea made on these men must have been terrific. Bruised and bewildered they had only their theories to fall back on. Hitherto slavery and freedom had been academic terms, now they began to understand them from their own personal experience. Being better educated and more able to express themselves than their fellows, they soon began to fan the real and justified discontent, which was at the bottom of the whole problem. Hounded into overcrowded guardships lest they should escape, they came into immediate contact with all manner of disease.²⁶ No ships had much sunlight below decks and these over-populated guardships

²⁶ Tomlinson quotes Dr. Lind as writing: "The guardship usually stationed at the Nore had proved fatal to the lives and health of many seamen, and experience has shown that the said ship has become a seminary of contagion to the whole fleet, by persons being brought from infected prisons." (Tomlinson, p. 184.)

were steeped in gloom. They were too crowded to be properly clean; old ships long past their prime, frequently damp, and with their indifferent officers not even capable of affording professional training. They were the direct cause of the death of a large number of those unfortunates who were so miserably recruited.²⁷ To anyone with the least pretence to a critical brain—and the Quota men had usually far more than a pretence—such conditions were not only inefficient, but wasteful and, from a psychological point of view, intolerable.

Some of these Quota men belonged to Corresponding Societies and the evidence which they gave of conditions at sea was undoubtedly excellent propaganda for revolutionaries, and so abhorrent did these make life in the Service appear that there were seamen who would deliberately mutilate themselves to avoid it. Of course, conditions were improving slowly. Sir Gilbert Blane's work under Rodney in the West Indies had produced staggering statistical results.²⁸ Rodney had the unusual intelligence to perceive that a fit crew was worth far more to him than an unfit crew, and saw to it that his surgeon's recommendations were carried out. The chief innovation was that he insisted that the mess decks should be kept clean. Yet the change was gradual. Surgeons still believed in bleeding for all manners of fevers and fluxes, and their knowledge of their trade, if we may believe Smollett, frequently consisted in being able to agree with their Captain that a rating was entirely fit either for duty or a flogging, and as late as 1797 St. Vincent could still complain of the mal-treatment of venereal disease.

That officers were not entirely ignorant of all this discontent is obvious, though it is equally obvious they had no real touch with the individuals under their command. Several schemes for manning the Navy with volunteers were suggested, and it is possible that in a few

²⁷ "I am well informed that in the month of January, 1771, there was no less than 876 patients at Haslar hospital belonging to the ships at Spithead and in Portsmouth Harbour sick of fevers and various diseases, which most likely had been brought upon them from crowding too much, and too long confined in tenders, etc., carrying from one place to another, whereby a considerable number of choice seamen who were received at that time died; and in February, 1771, the number upon the hospital books was increased to 1,288, and in March to 1,418. (Tomlinson, footnote, p. 183.)

²⁸ "It appears by my returns that there died in the course of 12 months preceding July last, on board ship, 750 seamen and marines, of which only 59 died in battle or of wounds. There died in the same time in hospitals, 862; that is, out of 12,109 men which is the sum total of the complement of 20 ships of the line, there have perished 1,577." (The arithmetic seems curious.) This was written by Gilbert Blane, October 13th, 1781. (See *Anatomy of Neptune*, p. 190.) In July, 1782, he wrote after some of his proposed remedies had been tried out in the "Formidable," that no man had died on board from December, 1781, to July, 1782.

more years Parliament might have been prevailed upon to improve things without the need of a mutiny to thrust it forcibly upon them. That the officers had no knowledge of the organization of the mutiny at all until after the whole thing had actually come to a head, shows their complete lack of touch with and understanding of the men.

Lieutenants' pay had been increased in 1795, and in 1797 Captains, against the wishes of the First Lord of the Admiralty and the advice of a minority of their brother officers, were asking for an increase for themselves. It may have been this request that precipitated the Mutiny, for it was obvious to the meanest intelligence that the Captains were infinitely better off than the seamen, and the concern of the Captains for themselves alone demonstrated very clearly to the Lower Deck the general attitude of the governing classes. On this score alone, they had some justification, therefore, for drawing attention forcibly to themselves.

THE REFORMS

But there are exceptions to every rule, and there were officers who cannot be included in the generalization that senior officers were out for their own hand alone. There were officers who perceived that the treatment of their men was not all that it might be, and from time to time their perception proved sufficiently intense to spur individuals into trying to improve conditions.

In 1758 George Grenville—then First Lord of the Admiralty, introduced and had passed an "Act for the Encouragement of Seamen employed in the Royal Navy and for establishing a regular method for the punctual, frequent and certain payment of their wages; and for enabling them more easily to remit the same for the support of their wives and families and preventing frauds and abuses attending such payment." This long and high-sounding title proved, however, to have little but a pious hope behind it; the promise which it suggested was scarcely fulfilled. Nevertheless, it did achieve the two months' advance for slops on the men first joining and the payment of six months' wages after a year's service when the ship was at a home port. If the ship was abroad, tickets were given as vouchers and these could be sent home and cashed by a deputy in London or one of the Home Ports. If the rating lived in Scotland his family had a long and expensive journey to get the cash. Naturally a great deal of abuse was possible with this system, and a great many persons availed themselves of its possibilities—all at the expense of the unfortunate seaman.

There followed a period of tranquillity. Various schemes were produced and sent to the Admiralty, others were printed in pamphlet form and hawked round the not very interested streets. The chief

object of these was to avoid the expensive and inefficient system of impressment, but nothing matured sufficiently to reach Parliament until, in 1777, Temple Luttrell introduced a comprehensive Bill based on a detailed essay by Lieutenant Robert Tomlinson, R.N. This, however, was rejected at its first reading. The case for the Government—the Bill being a political weapon in the hands of the Opposition—was ably presented by Lord Mulgrave, one of the Lords of the Admiralty. How far the political victory represented the real opinion of the House is doubtful; but the aristocracy were still convinced that all was for the best in the best of all possible worlds and declined to regard themselves as the representatives of the people. In 1780, a parliamentary committee was appointed to consider the subject, and produced a plan on similar lines, which never emerged from its cocoon state as the report of a special committee. Six years later William Pulteney, M.P. for Shrewsbury, re-introduced Tomlinson's scheme with slight numerical alterations and minor modifications, but this also failed at its first reading. Finally, in 1797, as the result of the Mutiny, the Treasury's hand was forced and the payment of seamen increased and victuals improved. Yet it was not until William IV's reign that volunteers were given a limited amount of service, or seamen registered to qualify for pension.

But the major change in the Service and the most beneficial was not a parliamentary one at all. It was the work of Spencer, Barham, and St. Vincent, and concerned the officers. St. Vincent began promoting officers because he thought they were good officers, and Spencer deliberately set out to assist him. Nelson, Troubridge, the younger Hoods, Foley and the rest of the zealous and energetic officers were given every encouragement and the old political class began to find themselves superceded. Officers were there to set an example not to disport themselves licentiously at Leghorn. If they were not prepared to work, then they could retire gracefully. By 1805 there was a spirit in the Navy which had never been seen before.

Most of the plans for the reform of Service conditions were based on two main planks: first, that the Merchant Service was so closely allied with the Royal Navy that the manning problem of one was the manning problem of the other—there was little point in financing a fleet to protect a non-existent trade; and, secondly, that volunteers did far more work and did it better than men compelled against their will. In either case the abolition of the "Press" was essential. To obtain volunteers the greatest argument besides the increase of pay and improvement of victuals was the establishment of a definite period of service, after which seamen might either go into the Merchant Service or, if they preferred, sign on for a further term in the Royal Navy. All

seamen were to be registered and once they had served their period in the Service they were entitled to exemption. Generally the suggestions were for a short time service, which would also be useful for training landsmen and ordinary seamen into able seamen for the merchant service. Nowadays we tend to short service periods to enable a reserve to be built up. This is necessary now that, for instance, the duties of a Quartermaster in a cargo ship are no longer interchangeable with those of a G.L.2. But in those days, when it was often the practice for merchant vessels to carry guns, seamen's duties were very similar. They could, therefore, be considered as a whole, and it was only fair that they should all have the same share in the risk in being in a man-of-war and of experiencing the discipline that is imposed. There could then be no envy of the merchant seamen by the Navy. All would have their turn. The sooner they had their turn, the sooner they would be exempt.

A definite period of service would also have administrative advantages. Knowing that three years' service was all that was required of them, desertion would not be worth the effort. When it appeared the only way to escape from eternal bondage there was some point in it, but there is a vast difference between three years and eternity.

Because of the rejection of this idea the fleet continued to be impressed, and about one-third of the seamen continued to desert each year—a proportion which exactly represented the numbers which would in any case have been released. Tomlinson made the interesting suggestion that reliefs for the East Indies should work their passage out in East Indiamen and so allow seamen due for discharge to come home in a similar manner. It was generally agreed that three years on the station was quite enough and service over that time merely became wasteful in personnel. Fatalities were always high due to the scarcity of fresh provisions and the poorness of the climate. But this scheme was objected to because it would entail too much paper work, it destroyed the system of volunteering for certain ships, and in many persons' opinion would go no further to solving the problem. This last argument was based on the failure of the bounties to accomplish very much.

Bounties seem to have been the tree which hid most of the wood. They were considerable, but the "press" still had to be relied upon to fill most of the ships, and hence the opinion that seamen would never volunteer for the Service. A Parliament run by bribery and corruption tended to think that the size of the bribe was all that mattered. Those who thought in terms other than bribes and who sought a certain amount of freedom and liberty when it could be obtained, and some assurance that at the end of an enforced career they would not be left destitute

and on the Parish's meagre support, were outside the experience of the majority of members of Parliament of those days.

The question of pensions was another with which most would-be reformers dealt. Tomlinson produced a comprehensive scheme by which he docked all seamen of sixpence from their full pay, so that they might obtain in return, at the age of fifty, five pounds a year, increasing a pound a year every five years, the maximum pension being seven pounds. This was to be paid irrespective of the pension from the Chatham chest (for injuries sustained on service). There were other similar schemes. The drawback to all of them, however, was that they came into operation only when there was a war on. Peace was regarded as the temporary diminution of the Service, instead of war being regarded as the temporary expansion. In peace, pension schemes did not pay and service in peace was not to count as service to obtain exemption from impressment. But the seamen themselves, once they were impressed, did not trouble about such things. Desertion was the aim of a large part of them and their chief interest was the improvement of their lot until they did desert. Hence we find in the Mutiny of 1797 the first request was for the improvement of pay, the second and third for better and fresher victuals issued at their full allowance or with a money payment in lieu when the allowance was necessarily short. The fourth was a request for better medical attention, and the sixth that, when a man was sick through the exigencies of the Service, his pay should be continued. The fifth was for occasional leave. There were already Captains who sometimes gave it, but they were the exception rather than the rule. Later, individual ships complained about the brutality of certain officers and these were removed to other ships. Most of the first-class officers seem to have been sent to the rather picked squadrons in the Mediterranean, and the Channel Fleet had a number of complaints. As a result of the Mutiny the Seamen obtained twenty-nine shillings and sixpence if they were Able, twenty-five shillings if they were Ordinary, and after some argument Landsmen continued to obtain the same pay as Ordinary Seamen. Victuals were re-established at 16 ounces to the pound, and the remaining objections were noted, and as a result of the revived personal spirit and the better relationship between officers and men conditions did improve generally.

In 1806 A.B.s received an increase of a shilling a week in their wages, and Ordinary Seamen of sixpence, making the pay from 1st January, 1807, up to the sum of £1 13s. 6d. and £1 5s. 6d. a month respectively; but it was not until 1825 that an Act was passed ensuring prompt payment. At this time certain monthly allowances were also granted and one can cite the establishment of sick-berth ratings in 1833 and in 1835 an Act which ruled that no person should be detained in

the Naval Service against his will for more than five years. In the same year we find the establishment of a register of seamen, which seems to mark the fading out of the old system of impressment, which was never actually abolished by Act of Parliament.²⁹ A year earlier, in 1834, an Order in Council laid down a more equitable distribution of prize money, upon which even Brenton commented: "If it be just to do it now, it would have been equally so to have done it earlier." In 1836 libraries were provided in sea-going ships, and in 1853 the Continuous Service Act offered increased rates of pay and other advantages to men entering the Service for ten years.

Corporal punishment came up for revision in due course. Flogging round the fleet had died a natural death before the end of the XVIIIth Century; but ferocious punishments were still inflicted. By 1828, due to outside pressure rather than to official initiative, there was a marked improvement in this matter. But it was not until 1860 that the Naval Discipline Act repealed the Articles of War, and with the Act of 1866 limited the number of lashes a man might receive to forty-eight. Most of these Acts, however, came long after the change itself. The radical change was the change in the outlook of the officers. Once officers became conscious of their responsibilities to men less fortunate than themselves, things began to right themselves. Recruitment depends ultimately on the spirit which dominates the Service, and that spirit emanates from above through the officers to the men. "Man cannot live by bread alone," and conditions in the Service can and should never compete with conditions ashore, but they must be adequate and, above all, seamen should feel they are doing something which matters. It was the gradual appreciation of those principles which marked the years 1750-1805 as an important period in the transition of the Navy.

²⁹ Blane states, Returns from the fleet were rendered by Rodney's orders, and the "Formidable" experiment was carried out through him.

THE WORK OF THE AUXILIARY TERRITORIAL SERVICE IN THE WAR

By CHIEF CONTROLLER MRS. J. KNOX, A.T.S.

On Wednesday, 14th January, 1942.

LIEUT.-GENERAL SIR RONALD F. ADAM, Bt., K.C.B., D.S.O., O.B.E.
(Adjutant General to the Forces), in the Chair.

THE CHAIRMAN, on introducing the Lecturer, said: Without keeping you waiting any longer I would like to introduce Chief Controller J. Knox, who has undertaken an enormous task in controlling the Auxiliary Territorial Service at a time when it has expanded vastly and experienced many changes from the design prepared before the war.

LECTURE

I WAS extremely glad to accept the kind invitation to come here to-day to talk to you for a short time about the Auxiliary Territorial Service. I should like to tell you how it began, what it is for, and something about the women who fill its ranks.

In June, 1938, the War Office came to the conclusion that there would be a real need for a women's service when war broke out. Many of us had reached the same conclusion some time before and, when the call was made, thousands of women volunteered. During the first year the new platoons were trained in foot-drill and physical exercises. This was intended not to produce a Service of amazons, but to bring into the women's lives a sense of discipline in its truest meaning and to create the spirit of unity which is the basis of *esprit-de-corps*. The platoons were divided into four categories, for which they also received training, namely cooks, clerks, orderlies and storewomen. Driving companies were formed by the Women's Transport Corps (F.A.N.Y.)—a corps of well trained and experienced women with a history dating back to 1908.

When war broke out there were 17,000 of us deployed to action stations; but only about half had attended annual camp during a not-too-dry summer and had thus added to their rather sketchy training their first experience of living under canvas.

The object of the War Office in forming the Auxiliary Territorial Service was to release men from tasks which could be done equally well, or better, by women. This, we are proud to say, has been accomplished. The Service was formed into platoons, companies and groups within Commands, and for a short time activities were limited to the pre-war employments, telephone switchboard and teleprinter operators. As the war progressed, however, demands upon the Service multiplied rapidly. Not merely did we have to increase the number of recruits for the duties

already mentioned, but in addition we had to find and train candidates for more technical work.

In March and April, 1940, we despatched drafts of officers and other ranks to France to serve with the B.E.F. They were stationed at Dieppe, Paris, Nantes, Rheims and Havre. All arrived back in this country before the evacuation of Dunkirk was completed, leaving France in small packets whenever possible. The last draft to leave Paris was only one hour in advance of the entry of the Germans.

To-day we undertake the provision of women for no less than thirty-eight trades and employments. Here are some of them. Operational duties include :—

Height-finder number	Predictor number
Identification telephone number	Radio mechanic
Operator, fire control	Wireless mechanic
Operator, kine-theodolite	

Non-operational duties include :—

Baker	Operator, comptometer
Chiroprapist	Operator, keyboard
Clerk (for all types of clerical work)	Operator, Special (R. Signals)
Cook	Operator, switchboard
Cycle repairer	Orderly
Draftswoman	Painter and decorator
Driver, I.C.	Photographic developer
Driver, mechanic	Plasterer camouflage
Equipment repairer	Projectionist cinema
Hairdresser	Storewoman (R.A.O.C. duties)
Instrument mechanic	Tailoress
Linguist	Telephone orderly
Machinist metal	Textile refitter
Mess steward	Tinsmith and whitesmith
Modeller camouflage	Turner
Motor cyclist	Vulcanizer
Operator, cipher	Watchmaker
	Wood turner and machinist

All this means more and more trained officers and N.C.Os. For the commissioned ranks, we are now turning out from two officer-training units about 300 officers a month. Our N.C.O. training establishment produces approximately 200 N.C.Os. a month. The demand for all ranks steadily increases, and I am proud to say that recruits now coming forward could not be of better quality.

In May, 1941, our officers were commissioned. This strengthened the disciplinary powers within the Service, thus enabling the introduction

of operational duties. From that time the energies of the Service have been directed into two main channels. It is necessary to make clear that we serve with static formations and not with field force units.

In the first channel, A.T.S. units serve as an ancillary to the military unit, still based on the original group, company and platoon formation. Auxiliaries in these formations live in their own quarters, usually in the neighbourhood of the military unit or units to which they are attached for duty, returning to quarters at night. These quarters may be requisitioned houses, camps or sometimes a barracks, and are the women's homes for the time being. A.T.S. officers and N.C.Os. are there to supervise accommodation, messing, issue of pay, and be available to deal with the many human problems which arise, to see to discipline generally, and at all times to afford Auxiliaries their help and advice.

In the second channel, Auxiliaries serve with men as a component of the military unit. In these mixed units, the Auxiliaries serving as operational numbers live at their place of duty and as operational personnel are part of the military unit, undertaking such duties as predictor, height-finder, identification numbers and operators fire control. They also have women officers and N.C.Os. whose duties are the same as those in the general duties formations, but with the technical knowledge of the operational work which the women undertake. No Auxiliary is compelled to serve as an operational number against her wish.

In whichever channel the Auxiliaries serve, they remain members of the Auxiliary Territorial Service, and the *esprit-de-corps* of this great Service is, I am proud to say, a real and flourishing factor in its increasing success. That is not to say that the Auxiliaries do not also absorb and cherish the proud tradition of the Royal Regiment of Artillery in which they have the honour to serve. On the contrary, mindful always of their first allegiance to the Mother Service, they find within the Regiment of their adoption the pride and stimulus so necessary to support them in their arduous and often dangerous work.

The Auxiliaries are drawn from all types—from country cottages, from large estates, from city flats, from civilian occupations of all kinds. There are differences, of course, in outlook and upbringing, and many different points of view, but the Service blends these thousands; and, as *esprit-de-corps* is built up, the individual finds companionship and interest in the main effort upon which we are all engaged.

The well-being of the women is the officers' first concern. During their period at the officer-training unit, it is instilled from the very beginning that the women must come first. The welfare generally of the Service is under the Director of Army Welfare. Throughout Commands

the welfare officers visit A.T.S. units. They may be male or female officers. They supply the extra chairs, pianos, gramophones, books and other amenities which make Service life so much more comfortable. To-day the scale for furniture and accommodation stores has been considerably increased, and we are now issued with the essentials with which to furnish the women's quarters. The Service has its own comforts fund which most generously supplies all the woollen comforts, material for curtains, cushions, jackets for sick bays, and many other articles which are not chargeable against public funds.

Here I should like to say that the Women's Voluntary Services afford the Auxiliary Territorial Service many extra amenities and facilities. They arrange accommodation for 48 hours' leave, entertainments, afternoon and evening hospitality, and so on. The Y.W.C.A. has provided throughout the country canteens which, with their kind lady workers in attendance, afford to the Service the atmosphere of real home. The N.A.A.F.I. institutes are also open to the women, and in many of the large training centres provide excellent canteens, huts for dances, entertainments and so forth.

The Army Education Corps affords every type of education, either musical or studious, run on parallel lines with that of the Army itself. Our women are encouraged to avail themselves of these excellent opportunities, which should have a marked effect on their lives when they return to civilian status.

We hope in the near future to run courses for N.C.Os. in what may be described as the running repairs of a house, such as the replacement of a tap-washer, the mending of a fuze, and elementary carpentry. This will mean a great saving of labour, for they will be self-supporting on minor repairs. From the time war began, many units have redecorated their rooms during their off-duty hours; and the keener the company, the more attractive and comfortable are their quarters.

We have an inspector of physical training, and throughout the Service the number of trained officer-instructors is fast increasing. They give instruction which of course improves physique and health beyond all recognition.

The Royal Army Medical Corps provide either men or women medical officers and nursing sisters. For minor sickness, sick bays are provided within units. Hospital cases are sent to either a military or civilian hospital. A very high standard of health has been maintained throughout the war, and there is a marked improvement in the appearance of the women after a few months of service. Personally, I attribute this to regular feeding, simple but excellent food, regular sleeping hours and exercise.

I have only told you a little about the A.T.S. I have only skimmed the surface of its activities, but I must pay high tribute to the thousands of Auxiliaries carrying out their work conscientiously and carefully through these months of war. It is upon their devotion to duty and public spirited efforts that we must build the great development which still lies before the Service.

THE CHAIRMAN

I may add one or two words to what the Chief Controller has said. First I would like to emphasize that the Auxiliary Territorial Service is a women's service run by women. We have had a great many suggestions put to us that we should get many more recruits if we allowed the women to enlist as gunners and signallers, that they should wear the same badges and become part and parcel of the corps which make up the Army; but we have steadfastly refused to do it. It is a women's service and the welfare and discipline are run by women. There is a rule that women decide what women can do, and if anyone suggests that women should do a job which, in the view of the women, they should not do, there is a right of appeal right away through to the Chief Controller and Secretary of State—right over my head. I am glad to say it has never had to be exercised. That is one point. The other is the whispering campaign that has been carried on against the A.T.S.: it has affected the Army overseas, and the men have been writing home suggesting that their womenkind do not join the A.T.S. You must remember that the A.T.S. cannot serve with the field army; they are serving more with depots, training units, etc. These men have seen the women working with them, they know the conditions, and we have never heard a murmur from the troops which have A.T.S. serving with them. When this whispering campaign came to a climax it brought an inevitable reaction, thanks to the Press and a number of letters in the Press. The Secretary of State got a letter from a Trade Unionist who had dealings with girls in the North of England, a great many of whom had entered the A.T.S., and he wrote to say that he wanted to protest. Any number of women had enlisted from this Trade Union into the A.T.S., and he had heard nothing but good from those girls both as to treatment and conditions. Conditions of course become a problem when you are expanding, and the Chief Controller has made it clear what an enormous expansion there has been not only in size but in the tasks which women are asked to do. Further, in a growing Service and in the conditions of the present time when building labour and material are scarce, accommodation is difficult to get. It is difficult to get certain articles like stoves in large quantities, and there must be a certain amount of hardship in the conditions. The women never complain, but very often small things are magnified in this whispering campaign which has been going on by people who should know better. The relations between the Army and the A.T.S. are magnificent, and nowhere better than in the mixed batteries. These are a joy to see. The spirit is extraordinarily good. The batteries always go to a practice camp before they occupy the gun sites. The shooting of the mixed batteries is extremely good and compares very favourably with the ordinary battery. I would like to thank on your behalf Chief Controller Jean Knox for her very illuminating talk on the A.T.S.

ADMIRAL SIR W. GOODENOUGH, G.C.B.: May I say, especially as one belonging to another branch of the Service—and I say that advisedly because I beg all to talk about the three branches of the same Service, not the three Services—that we are very grateful to Mrs. Knox, the Chief Controller of the A.T.S., for

coming here and speaking of that great body of which she is in command. That also is a word which I use advisedly. You see, and I am sure Mrs. Knox will be pleased to see, that you are supported here by another branch of the Service, the officers of the W.R.N.S. They come to show their wish to be with you, you and they together. Mrs. Knox and the Adjutant-General speak of criticism. We know that she has instituted in the A.T.S. a discipline of principle and not one solely of parade, although that parade is very necessary. We have heard about the critics, and perhaps with the advantage of age I may speak quite frankly on this subject. I would say, for the benefit of the Press, that it is a great pity that these critics did not come here to listen to Mrs. Knox, to put their criticisms forward and to get an answer, instead of wasting the time of the Secretary of State by asking ill-informed and uninstructed questions in a place—how shall I describe it—a place a little farther down the road. I want you to be assured that after the length of time which I have lived and served, during which I have seen a great many people, there is not the slightest necessity for either the Adjutant-General—who, I am sure, would not do such a thing—or the Chief Controller to be in any way apologetic. With the freedom of speech allowed to one of my age I would say to the critics, "All are ready to accept your criticism when it is constructive. When it comes to your destructive criticism, then you can go and be damned." I speak with the greatest possible seriousness to say that although the public have a very short memory they will remember that you and former officers are leading, will lead and have led a fine Service, who have every confidence in authority and who have to undertake real and serious duties. That is well away from what I got up to say, which is thank you, Sir Ronald, on behalf of the somewhat small but influential audience of the United Service Institution generally for coming here to preside over our business.

The customary votes of thanks to the Lecturer and Chairman were carried by acclamation.

BRITISH PARACHUTISTS

By "CONQUEST"

PARACHUTE troops are a unique product of this modern age and have made their debut for the first time in this War. There is nothing freakish about them; they are simply ordinary troops with a different method of travelling to battle. To "know your enemy" is essential, but it is equally important to know your own troops, and the time has now come when every British soldier should know something of this new and important arm.

Parachutes themselves are not new and were popular with balloonists of the Victorian era as a means of entertaining the public. The first known design is believed to be that of Leonardo da Vinci, the originator of so many modern inventions. An Englishman, Thomas Mastyn, designed a parachute in 1777, and it is reputed that a French balloonist named Blanchard carried out a successful drop with it. Another Frenchman, Garnerin, made a successful drop from a balloon in 1797 with a 23-foot oil silk parachute. The same man did a successful drop near London in 1802 from a balloon at 8,000 feet. In 1838 one John Hampton designed a parachute of the umbrella type, a canvas fabric braced by whalebone ribs, and carried out some twenty successful drops. The first unbraced silk parachute was invented by an American, Major Thomas Baldwin, before the 1914-1918 War. To Baldwin belongs the credit of originating the vent, thus diminishing oscillation and enabling the parachute to bear a greater shock load of opening.

In the years after the last War the Russians, with amazing foresight, quickly realized the potentialities of the parachute as a revolutionary means of waging war. They carried out extensive experiments culminating in an army of highly trained paratroops. General Wavell went to Russia and saw army manoeuvres carried out by paratroops and in a report to the War Office commented favourably on this new idea.

In the meantime the Germans had begun building their vast new army and they were not slow to learn from the Russians, neither did they miscalculate the possible value of such a weapon. They added a new branch to the Luftwaffe and have used it with boldness and skill in their many successful campaigns. They have adequately established the value, in fact necessity, of this new arm in modern war. Now every great army has, as a matter of course, its divisions of paratroops.

It is not part of the British character slavishly to copy. We usually manage to adapt, improve, and better exploit those inventions which do not happen to be our own. This is true of British parachuting.

Not long after the outbreak of this War a series of experimental stations were established in this country and a parachute unit was formed. This unit whilst being highly trained and ready for war was a means of co-ordinating and trying out the ideas of the soldier, airman and scientist. New equipment was designed and carefully tested. New types of parachutes were evolved and new weapons tried out. Various types of aircraft have been tried, and endless different ways investigated of getting out of a plane in the quickest way. As time went on, and in line with the growth of the Air Force and the Army, more units were added; and as industry makes more planes and equipment available, the expansion continues.

PERSONNEL AND TRAINING

British parachute troops are part of the Army working in conjunction with the Royal Air Force; in fact they could be, quite aptly, called the "Royal Marines" of the Air.

Parachute troops are all volunteers, young and fit. They are carefully selected and given a rigid medical examination. They volunteer for the joy of adventure and the pride of being part of a crack unit of highly trained men. They come from all parts of the British Isles and it is a wonderful experience to visit a camp and see walking together representatives of every famous regiment. There are separate companies of "Jocks," Fusiliers, Light Infantrymen and so on living together in complete harmony. The normal pride of regiment has been tempered by the needs of the common cause and given way to a real camaraderie between strange bedfellows; a comradeship which can always be found amongst men who, even during training, have to undergo a real test of courage. You will find the feud of the Clans set aside for the time being; Lowlanders cracking jokes with the ever cheerful Cockney; the North-East mingling with the South-West. The men are all trained soldiers, many of them Regulars or Reservists, plus a sprinkling of one-time civilians from every walk of life. The officers are, of course, very carefully selected and go through exactly the same hard training as the men.

British uniform is battle dress, over which is worn a brown overall to prevent equipment fouling the parachute as it opens. Parachutists are issued with a special steel helmet, and the badge is a pair of wings with an open parachute superimposed. They are also issued with special thick rubber-soled boots and knee-pads and have daggers, hand grenades and machine pistols.

The recruit on joining has to go through a very intensive course of ground parachute training. British jumpers, unlike any other, actually leave the plane through a circular hole in the floor, and their parachutes are opened automatically by a patent device in the plane known as the static line. The recruit during his intensive course is taught with models how to go through the hole, how to care for and manipulate his parachute, how to land and find his weapons, dropped in separate containers. He does several hours of physical training daily, including cross country runs and road walks to ensure a very high state of fitness and the development of muscles to withstand the shock of landing. This ground training is arduous, but it ensures that when the soldier comes to make his first jump he is expert and confident. Later he is taught endurance through hard marching, unarmed combat, field-craft and intensive weapon training or high explosives. He must know how to read a map and be able to find his way by the sun and stars. The final result is an infantryman of intelligence, highly trained and physically developed for the job on hand.

The worst moment, not unnaturally, is just before you jump. No matter how many jumps you may make, no matter how serenely you may approach the process, there is still a tremendously strong instinct not to throw yourself into the air. It is not fear, but a strong instinct which has to be overcome by great self-control. But once you have jumped and the parachute has opened, there is a supreme sense of thrill and achievement. One feels utterly alone and completely dependent on oneself, and there is a certain pleasure in that alone. The difficulties of landing seem quite insignificant. You feel as if you could do anything. The shock of landing can be compared with jumping off the roof of a train travelling about the same speed as the wind is blowing. After landing there is a curious reaction, due to relaxing the strong self-control needed to commit the unnatural act of throwing yourself out of an aeroplane.

To keep your hand in it is advisable to jump about once a month. There is no sense in doing it too often, as it does involve a considerable nervous strain, not to mention the chance of straining or breaking something, which of course depends on the ground and wind conditions. But if you stop jumping for two or three months you probably feel more frightened than you did the first time.

CO-OPERATION WITH OTHER ARMS AND POSSIBLE ROLES

Parachute troops may be likened to the old cavalry in so far as they are an arm which, directed by an Army or Corps Commander, carry out a special task as a forerunner of a major operation. There can be

no stereotyped dogma governing the use of these troops, as they represent an entirely new type of warfare, the possibilities of which have not by any means been fully explored. A bold commander will exploit their peculiar characteristics to the full in the way that the particular situation makes possible. However, it should be realized that whilst parachute troops have their own artillery in the form of R.A.F. bombers, and though they have the tremendous weapon of surprise and speed of operation, they are comparatively lightly armed and therefore after achieving their object must hang on and await the timely arrival of other arms to effect more permanent consolidation. This will be the determining factor as to their use.

Parachute troops can be used, as indeed they have been used by the Germans, as the spearhead of a major attack with the object of neutralizing A.A. and ground defences and seizing aerodromes as a vital prelude to mass air landings. Other roles are the seizing of ports and beaches for sea-borne operations, the destruction of enemy A.F.Vs. and transport, cutting of communications including bridges and railways to stop the arrival of hostile reinforcements, the attacking of military headquarters and ammunition dumps, the sabotage of factories and so on.

A commander with a force of parachute troops at his disposal is able, as never before, to carry out a pincer movement from an entirely unexpected quarter. Alternatively, he can hold them as a mobile reserve quickly to reinforce success or make a rapid counter-attack in a sudden emergency. Bridges can be seized or bridge-heads established to facilitate the rapid advance of mechanized columns. The possibilities are infinite.

It will be seen that all these operations depend for their ultimate success on careful co-operation with other arms of the Services. This is particularly important in the planning stages. R.A.F. bombers, long-range artillery, reconnaissance corps and tank units must all be briefed in the smallest details of the campaign. This is necessary to ensure strict adherence to timings, which assume an even greater importance than usual when parachute troops are being employed. Lives of brave men will often depend on the effectiveness of the support of other arms to maintain initial success won by the paratroops.

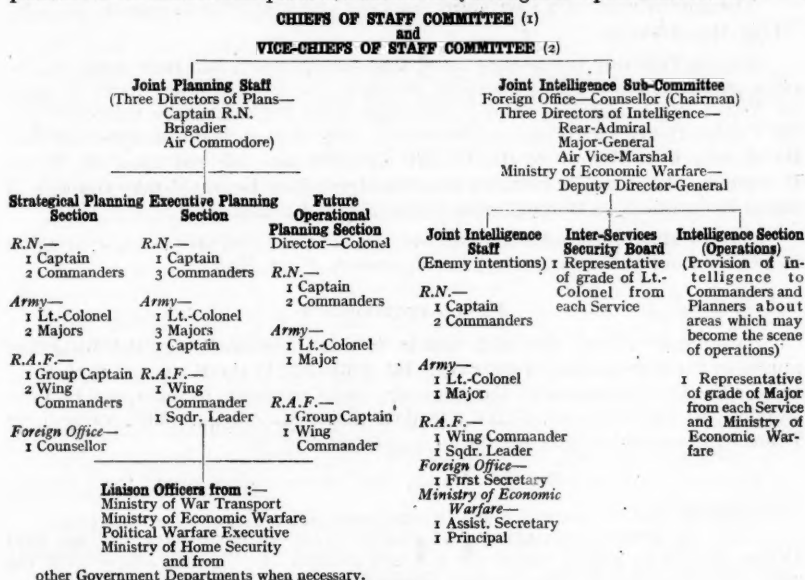
Above all, British soldiers must be taught to recognize British parachute troops and to realize that in future they will be working together hand in glove. Advanced forces must expect quite often to find parachute troops ahead of them holding enemy strong points, hanging on and awaiting co-operation.

GENERAL SERVICE NOTES

JOINT PLANNING ORGANIZATION

A White Paper on "The Organization for Joint Planning" (Cmd. 6351, price 1d.), issued on 21st April, 1942, states that "the ultimate responsibility for the conduct of the War rests with the War Cabinet, the Chiefs of Staff being their professional advisers. The Prime Minister and Minister of Defence superintends, on behalf of the War Cabinet, the work of the Chiefs of Staff Committee. In this matter he is assisted by the Defence Committee, which comprises, besides the Prime Minister as chairman, Mr. Attlee, Mr. Eden, Mr. Lyttelton, the three Service Ministers, the Chiefs of Staff and the Chief of Combined Operations. Other Ministers are invited to attend as necessary."

The Paper describes the position of the three Chiefs of Staff, working together as a "Joint General Staff."¹ The organization of the Joint Staff and the composition of its constituent parts are shown in the diagram reproduced below:—



NOTES

(1) COMPOSITION OF CHIEFS OF STAFF COMMITTEE

Chairman:—

General Sir Alan Brooke (Chief of the Imperial General Staff).

Members:—

Admiral of the Fleet Sir Dudley Pound (First Sea Lord and Chief of Naval Staff).

Air Chief Marshal Sir Charles Portal (Chief of the Air Staff).

Major-General Sir Hastings Ismay (representing the Minister of Defence and directing the Defence Secretariat).

Vice-Admiral Lord Louis Mountbatten (Chief of Combined Operations)—present when major strategical issues or specific combined operations are under discussion.

(2) THE VICE-CHIEFS OF STAFF.

In order to ease the burden of the dual task which devolves on the Chiefs of Staff of advising H.M. Government on defence policy as a whole, and at the same time directing the work of their own individual Services, each Chief of Staff has a Vice-Chief of Staff as his *alter ego*. The Vice-Chiefs of Staff hold regular meetings at which they deal, in the name of the Chiefs of Staff Committee, with such matters as are delegated to them.

Members:—

Vice-Admiral H. R. Moore (Vice-Chief of the Naval Staff).

Lieut.-General A. E. Nye (Vice-Chief of the Imperial General Staff).

Air Chief Marshal Sir Wilfrid Freeman (Vice-Chief of the Air Staff).

The chairmanship varies according to the nature of the business.

The composition and duties of the War Cabinet Secretariat and Staff of the office of Minister of Defence are also described.

¹ In order to avoid confusion, the terminology agreed by the United Nations is that the term "Joint" should be used to denote the Inter-Service collaboration of one nation; and that the term "Combined" should be used to denote collaboration between two or more of the United Nations.

NAVY NOTES

GREAT BRITAIN

H.M. THE KING

The First Lord of the Admiralty announced on 25th January that the King had consented to become Admiral of the Sea Cadet Corps.

BOARD OF ADMIRALTY

The appointment of a new Third Sea Lord and Controller is referred to under "Flag Appointments."

On 5th February it was announced that arrangements had been made for the office of Parliamentary and Financial Secretary to the Admiralty to be divided. Sir Victor Warrender was subsequently appointed Parliamentary Secretary and Mr. George Henry Hall Financial Secretary. His Majesty had also approved that the dignity of a Barony of the United Kingdom be conferred upon Sir Victor Warrender, and it was announced on 10th March that he would take the title of Baron Bruntisfield, of Boroughmuir, in the City of Edinburgh.

On 5th March, the appointment was announced of Captain R. A. Pilkington to be Civil Lord of the Admiralty, vice Captain A. U. M. Hudson.

FLAG APPOINTMENTS

THIRD SEA LORD.—On 25th March, it was announced that the King had approved the appointment of Rear-Admiral William F. Wake-Walker, C.B., C.B.E., to be a Lord Commissioner of the Admiralty and Controller, in succession to Vice-Admiral Sir Bruce Fraser, K.B.E., to date about May, 1942. Vice-Admiral Sir Bruce Fraser would shortly receive an appointment at sea.

C.-IN-C., CEYLON.—On 15th March, the Colonial Office issued the following announcement :—

"In the present emergency His Majesty's Government have decided that Ceylon should be placed under the supreme control of a Service officer with the title of Commander-in-Chief, Ceylon. Vice-Admiral Sir Geoffrey Layton has been selected for this appointment, and all naval, military, air and civil authorities in the area will be subject to his direction. He will be responsible for ensuring that all measures necessary for the defence of Ceylon are taken and that military and civil measures are fully co-ordinated."

Vice-Admiral Sir Geoffrey Layton assumed the duties of Commander-in-Chief, Ceylon, in the acting rank of Admiral, on 5th March.

EASTERN FLEET.—On 14th April it was announced that the King had approved the appointment of Admiral Sir James F. Somerville, K.C.B., K.B.E., D.S.O., as Commander-in-Chief, Eastern Fleet, in succession to Vice-Admiral Sir Geoffrey Layton, K.C.B., D.S.O.

AFRICAN STATION.—Vice-Admiral William E. C. Tait, C.B., M.V.O., became Commander-in-Chief, African Station, in succession to Acting Vice-Admiral A. U. Willis, C.B., D.S.O., to date 26th February, 1942.

SEA COMMANDS.—On 25th March, it was announced that the following Flag Officers had recently been appointed to sea commands :—

Acting Vice-Admiral Algernon U. Willis, C.B., D.S.O. ;

Rear-Admiral Stuart S. Bonham-Carter, C.B., C.V.O., D.S.O. ;

Rear-Admiral Thomas B. Drew, O.B.E. ;

Rear-Admiral William G. Tennant, C.B., M.V.O.

SIGNAL DEPARTMENT.—As from 25th March, Rear-Admiral Cedric S. Holland became Director of the Signal Department, Admiralty, in succession to Rear-Admiral Arthur J. L. Murray, C.B., D.S.O., O.B.E.

ENGINEER-IN-CHIEF.—Engineer Rear-Admiral Frederick R. G. Turner, C.B., O.B.E., was appointed Engineer-in-Chief of the Fleet, in succession to Engineer Vice-Admiral Sir George Preece, K.C.B., and was promoted to Engineer Vice-Admiral, to date 23rd March, 1942.

FLAG RETIREMENT

It was announced in the *London Gazette* that Admiral Sir Dudley B. N. North, K.C.V.O., C.B., C.S.I., C.M.G., had been placed on the Retired List, to date 15th February, 1942.

FLAG PROMOTIONS

The following promotions were announced on 9th April :—

Vice-Admiral Sir James F. Somerville, K.C.B., K.B.E., D.S.O. (retired), to Admiral on the retired list, to date 6th April, 1942.

Vice-Admiral Sir Charles G. Ramsey, K.C.B., and Vice-Admiral Sir T. Hugh Binney, K.C.B., D.S.O., to Admiral, to date 6th April, 1942.

Rear-Admiral Arthur J. L. Murray, C.B., D.S.O., O.B.E., and Rear-Admiral William F. Wake-Walker, C.B., C.B.E., to Vice-Admiral, to date 6th April, 1942.

The following promotions were announced on 16th February :—

Vice-Admiral Sir Charles Edward Kennedy-Purvis, K.C.B., to Admiral in H.M. Fleet, to date 15th February, 1942.

Rear-Admiral Ronald Hamilton Curzón Hallifax, C.B., to Vice-Admiral, to date 15th February, 1942.

The following Captains were promoted to Rear-Admiral, to date 6th February, 1942 :—

Captain Arthur D. Read, A.D.C.

Captain Cedric S. Holland, A.D.C.

Captain Henry C. Phillips, A.D.C.

Captain William G. Tennant, C.B., M.V.O.

Captain Victor A. C. Crutchley, V.C., D.S.C. (Commodore 2nd Class).

Captain John H. Edelsten, C.B.E. (Commodore 1st Class).

Captain Eric J. P. Brind, C.B.E. (Commodore 1st Class).

HONOURS AND AWARDS

VICTORIA CROSS.—On 28th February, it was announced that the King had approved the grant of the Victoria Cross, for valour and resolution in action against the enemy, to the late Lieutenant-Commander (A) Eugene Esmonde, D.S.O., R.N.

On the morning of 12th February Lieutenant-Commander Esmonde, commanding a squadron of the Fleet Air Arm, was told that the German battle-cruisers "Scharnhorst" and "Gneisenau" and the cruiser "Prince Eugen," strongly escorted by some thirty surface craft, were entering the Straits of Dover, and that his squadron must attack before they reached the sandbanks North-East of Calais.

Lieutenant-Commander Esmonde knew well that his enterprise was desperate. Soon after noon he and his squadron of six Swordfish flying boats set course for the enemy, and after 10 minutes' flight were attacked by a strong force of enemy fighters. He was then without a fighter escort and in the action which followed all his aircraft were damaged; but he flew on, serenely challenging hopeless odds, until he was shot down by the deadly fire of the battle-cruisers and their escort. But his squadron launched a gallant attack, in which at least one torpedo is believed to have struck the German battle-cruisers. Not one of the six aircraft returned.

The appointment of four officers to the Distinguished Service Order, the award of one Conspicuous Gallantry Medal, and the posthumous mention in despatches of 12 members of the same Swordfish squadron were also announced on 28th February.

K.B.E.—It was announced on 28th March that the King had appointed Rear-Admiral Philip Louis Vian, D.S.O., to be an additional Knight Commander of the Military Division of the Order of the British Empire.

Rear-Admiral Vian was in command of light forces of the Mediterranean Fleet, covering the passage of a convoy to Malta on 22nd March, and engaged a superior force of Italian cruisers and a battleship. A gallant and determined daylight torpedo attack caused the enemy force to withdraw without further attempt to interfere with the convoy.

C.B.—On 6th March, Major-General E. C. Weston, Royal Marines, was awarded the C.B. "for gallant and distinguished services in the Middle East." He organized and commanded the rearguard in the withdrawal from Crete.

On 31st March, Captain C. T. M. Pizey, D.S.O., R.N., was awarded the C.B. "for daring and fine judgment in leading a striking force of H.M. destroyers to a resolute attack in daylight, at close range and against odds, on the German battle-cruisers 'Scharnhorst' and 'Gneisenau' and the cruiser 'Prinz Eugen.'"

THE NAVY ESTIMATES

The Navy Estimates for 1942-43 were introduced in token form in the House of Commons on 26th February by Mr. A. V. Alexander, First Lord of the Admiralty. In the course of a review of the work of the Navy he made the following points:—

The Battle of the Atlantic, our principal preoccupation for the greater part of the year, had now developed into the Battle of the Seven Seas. The year 1941 opened with losses at a very heavy rate, but by autumn we had reduced them to a level far lower than it seemed legitimate to hope for. By the end of the year the Navy were able to reap a tangible reward in that the estimate of imports for the twelve months was exceeded.

U-boat construction was undoubtedly on an unprecedented scale; nevertheless, losses in convoy were still just under one half of 1 per cent.

Losses in the Far East and Pacific had been considerable, but a proportion of the ships lost were designed solely for the local trade of the China coast and would not have been of great value in trans-oceanic traffic.

Enemy U-boats had concentrated off the eastern seaboard of North America in order to take such profit as they could from a sudden incursion into waters hitherto immune.

For nearly a year there were no mercantile losses at all from German warship raiders. Twenty-two of such raiders and their supply ships were sunk during 1941. But a new period of raider activity, German and Japanese, might be at hand.

Our aircraft, submarines and surface warships in 1941 captured, sank, or seriously damaged 2,500,000 tons of shipping under Axis control.

An Army of 750,000 had been built up and maintained in the Middle East. We had kept Malta supplied under the very noses of the enemy. We had sent reinforcements to the Far East and taken in very difficult wintry weather large supplies to Russia. We had covered troop convoys to this country, to Iceland, and to Northern Ireland.

In operations for the defence of Crete the Navy drowned 5,000 German troops and rescued 16,500 British troops at great cost to themselves. During the siege of Tobruk, many thousands of men were moved by sea, including over 7,000 prisoners of war.

The corvette policy had been a proved success. These ships could be built at a much greater rate than any others which could have been provided for their task, and they had been splendidly operated.

We had far less productive capacity in shipbuilding than during the last war, but the labour force had been expanded by nearly 100 per cent. since the war began. The total of naval tonnage delivered in 1941 was almost as great as that in 1916, although the output of merchant tonnage last year was very much greater than in 1916.

This had been in spite of the burden of repairs occasioned by heavier steaming demands on our ships, and superficial and under-water damage from aircraft attack much greater than in the last war. We now had in hand bigger programmes than in the last war.

As regards the design of heavy ships, we had adhered to Treaty limits and the Germans had not. A special investigation was to be made into the evidence concerning losses to ensure that no lesson should be missed. A number of improvements had already been put into effect.

The heavy weight of torpedo bombing attack by the Japanese was a matter of great importance, but the initiative in such attacks against ships had lain with the British Fleet, and heavy and severe punishment had been inflicted upon the enemy on numerous occasions, and had resulted in the victories at Taranto and Matapan and in bringing the "Bismarck" to book. Nevertheless, it did point to the fact that every possible drive had to be put into further equipping ourselves for the development of this form of attack.

The British and American Navies were recovering from the heavy blows they suffered, and with the great programmes of construction being pressed forward they should go on expanding until they surpassed all-in-all the strength they could muster when Japan entered the War.

PERSONNEL

CONVOY COMMODORES.—An Order in Council of 25th July, 1939, provided for the payment of a consolidated salary of £1,700 per annum to retired Flag Officers appointed to serve in the rank of Commodore, 2nd class, R.N., or R.N.R. As the

total emoluments, exclusive of marriage allowances, of retired Captains, R.N., appointed to serve as Commodores of Convoy in the rank of Commodore, 2nd class, and in receipt of naval pay and allowances, might in certain circumstances exceed this sum, an Order in Council of 9th February, 1942, sanctions the rule that the total emoluments of such officers, exclusive of marriage allowances, shall in no circumstances exceed £1,700 per annum.

SEA CADET CORPS

Mr. A. V. Alexander, First Lord, inspected a parade of 1,000 Navy League Sea Cadets at Wellington Barracks on 25th January. After referring to the fact that the King had become Admiral of the Sea Cadet Corps, he announced that Admiral Sir Lionel Halsey would be Commodore of the Corps in England and Wales, and the Duke of Montrose, Commodore in Scotland.

The Admiralty took over the control of the Corps as from 21st January last. The administration was left with the Navy League. The Corps numbered in January about 12,000, and the immediate object was to raise its strength to 25,000. The revised arrangements cover cadets between the ages of 14 and 17. On attaining the age of 15 they would be expected to give an honourable undertaking, supported by consent of the parents, to join the Navy upon or before attaining the call-up age.

It was intended that selected Sea Cadet Officers should receive unpaid commissions in the Special Branch of the R.N. Volunteer Reserve.

MATERIAL

H.M.S. "DUKE OF YORK."—It was made known at the end of January that on his recent visit to the United States and Canada the Prime Minister travelled in H.M.S. "Duke of York." This was the first reference to the fact that this new battleship was at sea. She is a sister-ship of the "King George V," and one of the five ships of this class laid down in 1937.

SHIPS' WAR AGAINST AIRCRAFT.—On 4th February, Mr. Alexander stated in Parliament that 405 German and Italian planes were destroyed from the beginning of the War up to the end of last year by H.M. ships, 176 probably destroyed, and 239 damaged; by merchant vessels, 94 destroyed, 42 probably destroyed, and 96 damaged; and by the Fleet Air Arm, 143 destroyed, 22 probably destroyed, and 95 damaged.

ROYAL MARINES

PROMOTIONS.—Lieutenant-General Sir Alan G. B. Bourne, K.C.B., D.S.O., M.V.O., to be General, to date 26th January, 1942. Lieutenant-Colonel (acting Colonel) C. T. Brown, O.B.E., to be Acting Colonel Commandant (temporary Brigadier), to date 21st February, 1942.

DOMINIONS AND COLONIES

AUSTRALIA

LOSSES OFF JAVA.—On 13th March, Mr. Curtin, Australian Premier, announced that the cruiser "Perth" and the sloop "Yarra" were overdue on their return to Australia from the waters round Java, and must be presumed lost. There was no news of survivors. Both fought successfully in the battle of the Java Sea, and afterwards put into a Java port. They had not been heard of since they left there for home.

The "Perth" was commanded by Captain H. McD. L. Waller, D.S.O., R.A.N., the "Yarra" by Lieutenant-Commander R. W. Rankin, R.A.N.

CANADA

COMBINED OPERATIONS FORCE.—Speaking on 2nd April, Captain R. I. Agnew, Commanding Canadian Naval Establishments in the United Kingdom, said that a special force of intensely trained seamen, manning specially constructed boats, was being set up by Canada in co-operation with the British Admiralty for service in combined operations. The personnel of the units had been specially selected from a list of volunteers on the basis of their trade and service qualifications. Additional units would arrive from Canada to take the place of those who had joined the Combined Operations Command of the Royal Navy.

UNITED KINGDOM COMMAND.—It was announced on 7th February that Captain R. I. Agnew had taken up his duties as Officer Commanding Canadian Naval Establishments in Great Britain, in succession to Captain C. R. H. Taylor, who was returning to Canada for special duty.

PERSONNEL.—On 16th January, Mr. Angus Macdonald, the Canadian Navy Minister, announced that the personnel of the Royal Canadian Navy would be increased by 12,000 by March, bringing the total strength up to 40,000. (In January, 1941, the strength was 15,000.)

ARMY NOTES

H.M. THE KING

The King visited troops in a Southern Area on 6th and 20th March, and others in the Midlands on 1st April.

The King has been pleased to assume the Colonelcy-in-Chief of the Royal Malta Artillery ; 3rd April, 1942.

The King has been pleased to approve the undermentioned appointments :—

H.M. the Queen to be Colonel-in-Chief, Royal Army Medical Corps.

H.R.H. The Princess Elizabeth to be Colonel, Grenadier Guards.

Lieut.-General H.R.H. The Duke of Gloucester, K.G., K.T., K.P., G.C.M.G., G.C.V.O., to be Colonel-in-Chief of the Rifle Brigade and Royal Army Service Corps.

The King has been pleased to approve the following appointments :—

TO BE AIDE-DE-CAMP GENERAL TO THE KING.—General Sir Alan F. Hartley, K.C.S.I., C.B., D.S.O., Indian Army ; 15th December, 1941.

TO BE AIDE-DE-CAMP TO THE KING.—Colonel (temporary Brigadier) R. A. M. Basset, C.B.E., M.C. ; 4th November, 1941.

COLONEL COMMANDANT.—Major-General (temporary Lieut.-General) H. G. Martin, C.B., D.S.O., O.B.E., to be Colonel Commandant, Royal Artillery ; 3rd February, 1942.

COLONELS OF REGIMENTS.—

Major-General N. M. Wilson, C.B., D.S.O., O.B.E., retired pay, to be Colonel of the Royal Welch Fusiliers.

Major-General A. G. D. M. Mayne, C.B., D.S.O., Indian Army, to be Colonel of the 3/5th Mahratta Light Infantry ; 13th March, 1942.

ARMY COUNCIL

The King was pleased by Letters Patent under the Great Seal bearing date the 5th March, 1942, to appoint the following to be His Majesty's Army Council :—

The Right Honourable Sir Percy J. Grigg, K.C.B., K.C.S.I., President.

Brigadier-General Henry, Baron Croft, C.M.G., T.D., Vice-President.

General Sir Alan F. Brooke, K.C.B., D.S.O.

Lieut.-General Sir Ronald F. Adam, Bt., K.C.B., D.S.O., O.B.E.

General Sir Walter K. Venning, K.C.B., C.M.G., C.B.E., M.C., A.D.C.Gen.

Major-General (acting Lieut.-General) A. E. Nye, M.C.

Captain A. Henderson, K.C.

Captain E. D. Sandys.

Sir Robert J. Sinclair, K.B.E.

Sir Frederick C. Bovenschen, K.B.E., C.B.

E. B. B. Speed, Esq., M.C.

HONOURS AND AWARDS

Victoria Cross.—The King has approved the award of the Victoria Cross to—

(a) Brigadier (acting) J. C. Campbell, D.S.O., M.C., Royal Horse Artillery—in recognition of most conspicuous gallantry and devotion to duty at Sidi Rezegh on 21st and 22nd November, 1941.

(b) Lieutenant (acting Captain) P. J. Gardner, M.C., Royal Tank Regiment, Royal Armoured Corps—in recognition of most conspicuous and outstanding gallantry near Tobruk on 23rd November, 1941.

(c) Lieut.-Colonel C. G. W. Anderson, M.C., Australian Military Forces—in recognition of magnificent leadership, determination and outstanding courage in Malaya between 18th and 22nd January, 1942.

(d) Lieut.-Colonel A. E. Cumming, M.C., 12th Frontier Force Regiment, Indian Army—in recognition of outstanding gallantry, initiative and devotion to duty in Malaya on 3rd January, 1942.

(e) Lieutenant (temporary Captain) J. J. B. Jackman, The Royal Northumberland Fusiliers—in recognition of outstanding gallantry and devotion to duty above all praise in Libya on 25th November, 1941. (Posthumous award.)

George Cross.—It was announced on 16th April that the King had awarded the George Cross to Malta. In a message to the Governor of Malta the King said: "To honour her brave people, I award the George Cross to the island fortress of Malta to bear witness to a heroism and devotion that will long be famous in history."

APPOINTMENTS AND PROMOTIONS

The following appointment has been announced:—

To be G.O.C. Burma.—Lieut.-General the Hon. Sir Harold R. L. G. Alexander, K.C.B., C.S.I., D.S.O., M.C.; 5th March, 1942.

The following promotions have been announced:—

Generals.—To be General: The Hon. Sir Harold R. L. G. Alexander, K.C.B., C.I.E., D.S.O., M.C.; 17th January, 1942.

To be Honorary General—Hon. Lieut.-General H. H. Sir Joodha Shumshere Jung Bahadur Rana, G.C.B., G.C.S.I., G.C.I.E., Maharaja and Supreme Commander-in-Chief of Nepal.

Lieut.-Generals.—The undermentioned Major-General (temporary Lieut.-General) to be Lieut.-General:—

Sir Henry R. Pownall, K.B.E., C.B., D.S.O., M.C.; 17th January, 1942.

The undermentioned Major-Generals (acting Lieut.-Generals) to be temporary Lieut.-General:—

E. F. Norton, C.B., D.S.O., M.C.; 9th October, 1941.

H. C. Loyd, C.B., D.S.O., M.C.; 15th February, 1942.

The undermentioned Major-Generals to be acting Lieut.-General:—

W. H. G. Baker, C.B., D.S.O., O.B.E.; 24th October, 1941.

J. G. de R. Swayne, C.B.E.; 9th March, 1942.

The undermentioned Colonels (temporary Major-Generals) to be acting Lieut.-General :—

R. G. W. H. Stone, D.S.O., M.C. ; 1st February, 1942.

C. A. E. Cadell, C.B.E., M.C. ; 14th February, 1942.

J. T. Crocker, C.B.E., D.S.O., M.C. ; 16th March, 1942.

The undermentioned Colonel (acting Major-General) to be acting Lieut.-General :—

W. H. E. Gott, C.B.E., D.S.O., M.C. ; 9th February, 1942.

Major-Generals.—The undermentioned Colonels (temporary Major-Generals) to be Major-General :—

B. O. Hutchison, C.B., C.B.E. ; 17th January, 1942, with seniority 29th October, 1941.

S. W. Kirby, C.I.E., O.B.E., M.C. ; 12th February, 1942, with seniority 30th October, 1941.

The undermentioned Colonel (acting Major-General) to be Major-General :—
R. MacK. Scobie, C.B.E., M.C. ; 10th April, 1942, with seniority 8th November, 1941.

The undermentioned Colonels (acting Major-Generals) to be temporary Major-General :—

W. M. Ozanne, C.B.E., M.C. ; 12th January, 1942.

M. G. N. Stopford, D.S.O., M.C. ; 27th January, 1942.

G. I. Gartlan, C.B.E., D.S.O., M.C. ; 25th January, 1942.

O. P. Edgcumbe, M.C. ; 11th February, 1942.

E. H. Barker, C.B.E., D.S.O., M.C. ; 11th February, 1942.

J. S. Steele, D.S.O., M.C. ; 15th February, 1942.

P. J. Shears ; 24th February, 1942.

Hon. E. F. Lawson, C.B., D.S.O., M.C., T.D. ; 27th February, 1942.

L. G. Phillips, C.B.E., M.C. ; 25th February, 1942.

F. E. Morgan ; 28th February, 1942.

R. M. Weeks, C.B.E., D.S.O., M.C. ; 17th March, 1942.

S. W. Kyle (retired, re-employed), late R.A.M.C. ; 26th March, 1942.

A. R. Selby, C.B.E. ; 29th March, 1942.

E. F. Tickell, C.B.E., M.C. ; 29th March, 1942.

Sir John E. Laurie, Bt., C.B.E., D.S.O. ; 30th March, 1942.

C. St. Q. O. Fullbrook-Leggatt, D.S.O., M.C. ; 6th April, 1942.

War Subs. Lieutenant (acting Major-General) J. Buckley, D.S.O., M.C., to be temporary Major-General, and is granted the war substantive rank of Colonel.

The undermentioned Colonels (temporary Brigadiers) to be acting Major-General :—

D. J. R. Richards, D.S.O., M.C. ; 1st January, 1942.

C. G. Phillips, D.S.O., M.C. ; 29th December, 1941.

C. W. Toovey, M.C. ; 24th October, 1941.

C. le B. Goldney, C.B.E., M.C. ; 22nd December, 1941.

B. W. Key, D.S.O., M.C., Indian Army ; 14th January, 1942.

A. F. Harding, C.B.E., M.C. ; 26th January, 1942.

G. W. Symes, M.C. ; 11th February, 1942.

A. Maxwell, C.B.E., M.C. ; 3rd February, 1942.

A. J. C. Pollock, C.B.E. ; 3rd February, 1942.

A. C. Arnold, C.B.E., M.C. ; 3rd February, 1942.

J. C. Campbell, V.C., D.S.O., M.C. ; 9th February, 1942.

O. T. Frith ; 14th February, 1942.

E. A. E. Tremlett ; 14th February, 1942.

C. W. Fladgate, C.B.E., A.D.C. ; 1st March, 1942.

J. A. C. Whitaker, C.B.E. ; 9th March, 1942.

G. I. Thomas, D.S.O., M.C. ; 9th March, 1942.

R. A. M. Basset, C.B.E., M.C., A.D.C. ; 11th February, 1942.

I. T. P. Hughes, D.S.O., M.C. ; 20th March, 1942.

F. C. Wrisberg ; 3rd March, 1942.

The undermentioned Lieut.-Colonels to be acting Major-General :—

C. A. P. Murison, C.B.E., M.C., R.A. ; 1st January, 1942.

(Temporary Brigadier) E. Hakewill-Smith, M.C., Royal Scots Fusiliers ; 25th March, 1942.

(Temporary Brigadier) J. C. Haydon, D.S.O., O.B.E., Irish Guards ; 28th March, 1942.

THE ARMY IN INDIA.—The following appointments and promotions have been announced :—

To be Commander-in-Chief in India.—General Sir Archibald P. Wavell, G.C.B., C.M.G., M.C. ; 7th March, 1942.

To be G.O.C.-in-C., Northern Command.—Lieut.-General C. D. Noyes, C.B., C.I.E., M.C., Indian Army ; 22nd January, 1942.

To be Chief of the General Staff, India.—Lieut.-General E. L. Morris, C.B., O.B.E., M.C. ; 14th February, 1942.

To be Quartermaster-General in India, with acting rank of Lieut.-General.—Major-General W. G. H. Vickers, O.B.E., Indian Army ; 2nd March, 1942.

To be Deputy Engineer-in-Chief, with acting rank of Major-General.—Colonel (temporary Brigadier) H. E. Roome, C.B.E., M.C. ; 21st November, 1941.

To be Director of Military Training, with acting rank of Major-General.—Colonel (temporary Brigadier) W. L. Lloyd, C.B.E., D.S.O., M.C., Indian Army ; 15th December, 1941.

To be a Corps Commander.—Major-General T. W. Corbett, C.B., M.C., Indian Army ; 12th January, 1942.

To be a Divisional Commander.—Major-General C. A. Heydeman, C.B., M.C. ; 15th September, 1941.

The undermentioned Colonels (temporary Brigadiers) to be Divisional Commanders, with acting rank of Major-General :—

F. I. S. Toker, O.B.E., Indian Army ; 1st October, 1941.

J. G. Smyth, V.C., M.C., Indian Army ; 20th October, 1941.

To be a District Commander.—Colonel (acting Major-General) H. H. Rich, Indian Army ; 8th March, 1942.

To be acting Lieut.-General.—Major-General G. N. Molesworth, C.S.I. ; 29th December, 1941.

GENERAL

GENERAL SERVICE CORPS.—It was announced on 20th February that a General Service Corps had been created, to which recruits to the Army would be posted for basic training and intelligence tests.

HOME GUARD.—It was announced on 11th March that the power of compulsory enrolment in the Home Guard was to be applied in the areas approximately of the Eastern, South-Eastern and Southern Commands, and that it would be introduced in other areas as and when it became necessary. On 26th March it was announced that the power of compulsory service was to be extended to the whole of the country.

GERMAN ESTIMATE OF THE BRITISH IN LIBYA.—From Cairo last February came the report of an estimate recorded by a German officer serving on the Libyan front with the Afrika Korps.

"British and Australians," he says, "are tough, hard opponents as individual fighters, highly skilled in defence, unimaginative and inflexible in attack, cold-blooded and skilled in fighting, experienced in assault, and capable of standing up to all kinds of hardships. As a prisoner the Englishman is arrogant, proud, cautious, and absolutely sure of himself. Coloured auxiliary and Indian troops are worked up to a very high pitch. Caution is recommended when dealing with them.

"The Englishman is well versed in positional warfare. In counter-attacks against defensive positions he is clever in close combat. His methods of attack with assault detachments are well thought out. The equipment of the assault detachments is excellent."

VICTORIA CROSS.—When Queen Victoria instituted the decoration in 1856 she decreed that the medals should be struck from the metal of guns captured at Sevastopol during the Crimean war. The supply of this metal has now run out. In future the Victoria Cross will be made from gunmetal supplied by the Mint.

CADET FORCE.—In order to provide a greater number of boys with pre-entry training for the Army, the War Office has instituted an expansion of the Cadet Force. By the end of last March the Force had grown to 530 units, with a strength of nearly 60,000, as against 198 with a strength of 13,000 a year previously. Apart from its military aspect, the Cadet Force is one of the recognized youth organizations.

ARMY AIR CORPS.—The War Office announced on 24th March the formation of the Army Air Corps, which has been created in order to simplify the administration of Army air-borne units. Hitherto these troops have been administered by their own regiments. A start has been made by bringing one regiment within the scope of the new corps—this is a regiment of glider pilots—and further units will be included progressively. The preparations for the transfer of troops to the new corps have been in progress for some time.

CIVILIAN AIR RAID CASUALTIES.—The following figures show civilian casualties due to air raids in the United Kingdom during 1942 :—

		<i>Killed</i>	<i>Injured and detained in hospital</i>	<i>Total.</i>
January	...	112	61	173
February	...	22	21	43
March	...	21	13	34

CANADA

HOME DEFENCE.—It was officially announced in February that a new home defence army of more than 50,000 men would shortly be formed. It was to be recruited from volunteers under 19 and over 35 years of age, and men of all ages physically unfit for oversea service.

It was to be organized in four divisions, with one brigade for each of the eleven military districts, and would train at night, in holidays, and at week-ends with pay. It would be given full equipment for defensive operations, including tanks, heavy artillery and mechanized transport.

CANADIAN TROOPS IN BRITAIN.—The Canadian Minister of Defence stated last February that during the next fourteen months Canada would add from 90,000 to 100,000 men to her army in Britain, completing the formation of an army of two corps. It had been previously announced that these two corps would consist of three infantry divisions and two tank brigades, and two armoured divisions, respectively.

The Headquarters of the 1st Canadian Army under Lieut.-General A. G. L. McNaughton, C.B., C.M.G., D.S.O. were established in the United Kingdom, with effect from 6th April, 1942.

FURTHER MOBILIZATION.—It was announced on 25th March that the Canadian Government had authorized the mobilization of two additional army divisions.

AUSTRALIA

LOSSES IN MALAYA.—It was officially announced in Canberra on 13th March that the A.I.F. losses in Malaya, including prisoners, were 17,031, as compared with 13,335 in the Middle East. This estimate was necessarily based on calculations, but it was known that 287 officers and men were killed before the fall of Singapore, and that left 16,774 unaccounted for. The majority were presumed to be prisoners.

AUSTRALIAN IMPERIAL FORCE.—It was announced at the end of March that part of the A.I.F. which had been serving in the Middle East had returned to Australia to strengthen the home defence army. A portion of the A.I.F. remained in the Middle East under the command of Major-General Sir Leslie Morshead.

COMMAND IN AUSTRALIA.—On 27th March General Sir Thomas Blamey, who had returned to Australia, was appointed Commander-in-Chief of the Allied land forces in that country. The Military Board, which had been the supreme strategic authority in charge of the home defence forces, ceased to function as such, and its members became the principal staff officers under General Blamey.

INDIA

GENERAL HEADQUARTERS.—It was announced on 26th February that neither the Civil Secretariat nor General Headquarters would move from Delhi to Simla this summer.

4TH INDIAN DIVISION.—Speaking in the Council of State at Delhi on 18th February, the Commander-in-Chief (General Sir Alan Hartley) stated that a highly-placed British officer visiting Delhi from the Middle East had declared that the 4th Indian Division was at the moment the best fighting formation in the Empire.

AIR NOTES

ROYAL AIR FORCE

H.M. THE KING

The King and Queen visited bomber stations of the R.A.F. on 25th March. At one station they heard the story of the recent raid on Bruneval by parachute troops from the two officers who led the raid. Wing Commander Pickard gave details of the organization of the Whitley bomber squadron which took the parachutist troops to their target, and Major J. D. Frost how his men carried out their successful attack. Their Majesties also met numbers of pilots from Canada, Australia, New Zealand and South Africa.

On 13th February, the King and Queen visited Headquarters of the Air Transport Auxiliary, where men and women pilots told them of their adventures in delivering aeroplanes of every kind to R.A.F. stations all over the country. Pilots from many nations, including the United States, Poland, Czechoslovakia and Spain, work in the A.T.A., and some of them to whom their Majesties talked have flown the Atlantic several times delivering large American bombers.

APPOINTMENTS

The following appointments were announced on 20th February :—

Air Marshal A. T. Harris, C.B., O.B.E., A.F.C., to be Commander-in-Chief, Bomber Command, vice Air Marshal Sir Richard E. C. Peirse, K.C.B., D.S.O., A.F.C., who was subsequently appointed A.O.C.-in-Chief, India, in succession to Air Marshal Sir Patrick H. L. Playfair, K.B.E., C.B., C.V.O., M.C.

Air Vice-Marshal D. C. S. Evill, C.B., D.S.C., A.F.C., to succeed Air Marshal Harris as Head of the R.A.F. Delegation in Washington, and granted the acting rank of Air Marshal as from 9th February, 1942.

PROMOTIONS

The following Air Commodores have been promoted to Air Vice-Marshal (temporary) to date 1st December, 1941 :—

H. V. Champion de Crespigny, M.C., D.F.C. (acting Air Vice-Marshal).

J. M. Robb, C.B., D.S.O., D.F.C., A.F.C. (acting Air Vice-Marshal).

J. J. Breen, O.B.E.

G. C. Pirie, C.B.E., M.C., D.F.C. (acting Air Vice-Marshal).

R. H. M. S. Saundby, M.C., D.F.C., A.F.C. (acting Air Vice-Marshal).

D. F. Stevenson, C.B.E., D.S.O., M.C. (acting Air Vice-Marshal).

Hon. R. A. Cochrane, C.B.E., A.F.C.

W. A. Coryton, C.B., M.V.O., D.F.C.

Air Commodore G. R. Bromet, C.B.E., D.S.O., is granted the acting rank of Air Vice-Marshal (12th December, 1941).

Air Commodore D. Harries, A.F.C., is granted the acting rank of Air Vice-Marshal (28th January, 1942).

Air Commodore H. H. McL. Fraser is granted the acting rank of Air Vice-Marshal (25th February, 1942).

The following Group Captains have been promoted to Air Commodore (temporary), all dated from 1st December, 1941 :—

L. O. Brown, C.B.E., D.S.C., A.F.C.
C. E. V. Porter.
R. A. George, M.C.
P. H. Mackworth, D.F.C.
W. Elliot, C.B.E., D.F.C.
J. W. Baker, M.C., D.F.C.

Technical Branch—

The following Group Captains have been promoted to Air Commodore (temporary), dated 1st December, 1941 :—

C. Turner, A.F.C.
C. B. Cooke, C.B.E.
E. J. Cuckney, D.S.C.
H. J. Roach, O.B.E., A.F.C.
D. F. Lucking.
G. A. H. Pidcock.

Medical Branch—

The following Group Captain has been promoted to Air Commodore (temporary), dated 1st December, 1941 :—

T. J. Kelly, M.C.

RETIREMENTS

It was announced on 3rd March that Air Chief Marshal Sir Arthur Longmore, G.C.B., D.S.O., Inspector-General of the Royal Air Force, had been placed on the retired list at his own request from 1st March in order to accelerate the promotion of younger officers.

Sir Arthur Longmore was appointed an Inspector-General in July, 1941, on his return from overseas, where he had been Air Officer Commanding-in-Chief, R.A.F., Middle East, since May, 1940. During his period of command he was responsible for the R.A.F. part in General Wavell's advance in the first Battle of Libya. His flying career dates from 1911, when he was one of the first four naval officers to learn to fly at Eastchurch.

Air Vice-Marshal (acting Air Marshal) L. A. Pattinson, C.B., D.S.O., M.C., D.F.C., is placed on the retired list, and retains the rank of Air Marshal (substitution for notification in the *London Gazette* of 21st October, 1941).

Air Vice-Marshal J. H. S. Tyssen, C.B., M.C., is placed on the retired list (21st February, 1942).

Air Commodore A. C. Wright, A.F.C., is placed on the retired list (9th March, 1942).

HONOURS AND AWARDS

VICTORIA CROSS.—On 13th March, it was announced that the King had conferred the Victoria Cross posthumously on Flying Officer Kenneth Campbell, R.A.F. Volunteer Reserve, No. 22 Squadron, in recognition of most conspicuous bravery. This officer was the pilot of a Beaufort aircraft of Coastal Command which was detailed to attack an enemy battle cruiser in Brest Harbour on the morning of 6th April, 1941. The aircraft did not return, but it is now known that a torpedo attack was carried out with the utmost daring. Flying Officer Campbell,

who was born in 1917, entered the R.A.F. from the Cambridge University Air Squadron, receiving his commission in the R.A.F.V.R. in August, 1938, and being called up for service soon after the outbreak of war.

THE AIR ESTIMATES

Sir Archibald Sinclair, Secretary of State for Air, introduced the Air Estimates in token form in the House of Commons on 4th March. The following were among the points made in his speech :—

He told the House a year ago that we should exact from the night bombers an increasing toll. That assurance was amply fulfilled. Though the German bomber force has acquired other occupations since a year ago, there has never been a time during recent months without a very substantial number of bombers within easy reach of our cities.

Since June the main task of the R.A.F. had been to give the utmost possible help to our Russian allies. Our squadrons acquitted themselves admirably in Murmansk. It was never intended they should remain in operation during the winter months, and after demonstrating the Hurricanes in action and handing them over, they were withdrawn.

In other important ways the R.A.F. was helping Russia. Squadrons in Malta and Africa engaged large numbers of German fighter squadrons; as did fighter and bomber sweeps over North Western France, constant fighter patrol activity in the same region, fighter and bomber attacks upon shipping in the narrow seas, and bomber attacks upon industrial Germany.

Although the fighting over the enemy's territory has been hard, our fighter squadrons have kept the balance of casualties in their favour. We have destroyed 813 enemy fighters against the loss of 537 of our own.

The second main aspect of our operational activities is the co-operation with the Navy in the Battle of the Atlantic. Working under the operational control of the Navy in all its activities from Iceland to Gibraltar, Coastal Command is reconnoitring, photographing, hunting U-boats, protecting convoys, sinking enemy ships, and bombing ports and harbours from Trondhjem to Bordeaux. Together with the Navy they have driven the U-boats right out of the Western Approaches.

Bomber Command kept three of the most formidable German warships ignominiously confined in Brest while the battle raged outside; attacked U-boats in their nests; attacked U-boat slipways, engine and accumulator factories; laid many hundreds of mines; and spent 40 per cent. of its total effort on targets which the Navy asked it to bomb. Fighter Command, in protective patrols over our convoys and shipping, had flown over 50,000 sorties.

The third main aspect of air operations had been co-operation in the Middle and Far East. Our forces in the Far East had to fight under grievous shortage of air power. In spite of their extreme tactical mobility, air forces are not strategically mobile; maintenance crews, equipment, petrol, bombs and ammunition have all to be sent by sea.

Nevertheless, we had sent large numbers of aircraft to the Far East, at extreme risk, and reinforcements continue to arrive. Our fighter, bomber, and general reconnaissance squadrons there have fought against great odds and co-operated closely and successfully with the Army.

In the Middle East, heavy and persistent air attacks upon the ports of Libya and Tripoli, Sicily and Italy, upon aerodromes and convoys crossing the Mediterranean, formed for many months the essential prelude to the battle.

In the six months preceding General Auchinleck's advance, the R.A.F. and Naval aircraft sank some 175,000 tons of enemy shipping. To send to the bottom a ship with 50 tanks is a big contribution to success in the land battle.

When the battle was joined, our air superiority, which by hard bombing and fighting had been gradually acquired, was quickly asserted. It enabled our air forces to throw their whole weight into the land battle.

He strongly deprecated the mischievous agitation which misrepresented the unwillingness of the R.A.F. to work with its Sister Services. It makes for the very fault—ill-feeling between the Services—which it affects to condemn.

The R.A.F. has beaten the Germans in every other form of air fighting, and it means to beat them at Army co-operation. The status of Army Co-operation Command is no whit inferior to that of the other three operational commands. We are now about to re-equip the tactical reconnaissance squadrons with aircraft of a new type, described as the best of the American fighters now in full production.

There had been a huge expansion of our training organisation during the past year. The immense organization in Canada for training air crews from Canada, Australia, New Zealand, Newfoundland and the United Kingdom, was completed months ahead of schedule.

Considerable training organizations now fully developed in Australia and New Zealand had been providing trained air crews in substantial numbers. Middle East squadrons had been reinforced by pilots and crews trained in Rhodesia and South Africa. Pilots trained in India had been in battle against the Japanese.

Last summer the U.S. Army Air Corps placed at our disposal a substantial portion of their pilot training organization, and the U.S. Naval Air Service undertook to train crews for us. We were also able to organize flying training at civil schools in the U.S.A.

The latest marks of Hurricane and Spitfire are so improved as to be virtually new types of aircraft. Further new types, some of revolutionary design, are ripening. The Americans have some very fine new types coming along, and are also to send us dive bombers.

In the Battle of Britain, the Stukas lasted precisely two days, after which, owing to the enormous rate of casualties, they disappeared completely. In Libya, the enemy has not used dive bombers to any great extent. In short, the dive bomber has been proved by experience to be an effective weapon only in a theatre where a complete or very large measure of air superiority has already been gained. The Germans realize this, and the proportion of dive bombers to the total bombing strength has been much reduced.

Nevertheless, in June, 1940, the Government ordered dive bombers in America, where they could be most swiftly produced, and aircraft of a type which as a dive-bomber is markedly superior to the Ju-87 will shortly be available.

The development of bombs is being kept in step with development of aircraft. Bombs of a size regarded as exceptionally large a year ago are now in full supply, while others, still larger, should shortly be available for delivery to the Axis Powers.

In spite of the exceptional inactivity due to bad weather of the past two months, the tonnage of bombs dropped by Bomber Command in January and February this year is 50 per cent. greater than that dropped in January and February, 1941.

There is a steady increase in the minelaying activities of the bomber squadrons. The bomber offensive against Germany is one of the indispensable means of winning this war. Hitler is preparing his spring offensive. Soon he will launch it. Its impact will fall upon Russia. We shall not stand helplessly aloof. Bomber Command will strike hard at the vital centres of German war industry and transport.

AIR TRAINING CORPS

On 3rd March, it was announced that the title of Director of Pre-Entry Training had been changed to "Director of the Air Training Corps." Mr. W. W. Wakefield has succeeded Mr. J. F. Wolfenden who held the former appointment.

By 25th March, the A.T.C. had reached a strength of nearly 180,000, and the figure was still increasing, despite the numbers passing into the Royal Air Force.

ROYAL OBSERVER CORPS

It was announced in January that a new battle dress for members of the Royal Observer Corps had been approved by the Air Ministry. It is a blue-grey serge with shoulder straps and belt. A woven circular badge with the words "Royal Observer Corps," an eagle in the centre and surmounted by a crown, is to be worn on the left breast. Head-dress will continue to be a dark blue beret bearing the R.O.C. metal badge.

AUSTRALIA

The Melbourne correspondent of *The Times*, in a message dated 10th April, stated that after more than two years in Australia as Chief of the Air Staff, Air Chief Marshal Sir Charles Burnett, whose term had expired, was returning to the United Kingdom. He will be succeeded by an Australian. Air Chief Marshal Burnett, added the correspondent, has built up the R.A.A.F. from a few aeroplanes and a handful of flying personnel to its present considerable strength. Those who are in a position to appreciate what he has done are most grateful to him for his splendid service to Australia.

CANADA

AIR TRAINING.—Air Vice-Marshal Robert Leckie, Member of the Canadian Air Council, arrived in England towards the end of January to discuss with the Air Ministry and R.C.A.F. Headquarters in London matters connected with the operation of the Empire Air Training Scheme, and to hear at first hand of the experience of graduates from Canada on air operations.

On 31st January, it was announced from R.C.A.F. Headquarters in Ottawa that the Air Training Scheme was so far ahead of original schedule that four weeks was to be added to the course at flying schools to improve the quality of pilots.

PROMOTION.—Group Captain W. A. Curtis, Deputy Air Officer-in-Chief, R.C.A.F. Oversea, was promoted in February to be Air Commodore, R.C.A.F.

REVIEWS OF BOOKS

GENERAL

The War : First Year. By Edgar McInnis. (Oxford University Press.) 7s. 6d.

The War : Second Year. 8s. 6d.

The first of these two volumes covers the War up to August, 1940, and the second continues the story to September, 1941. The author—Professor of History at the University of Toronto—gives us an excellent account of the War in broad outline, without going into great detail. Political and economic events are dealt with equally as much as military operations. Professor McInnis writes in a simple and lucid style, and the books are very readable throughout.

NAVAL

Sea Power and British North America. By Gerald S. Graham. 1783–1820. Harvard Historical Studies, 46. (Oxford University Press.) 20s.

Mr. Gerald Graham, who is Assistant Professor of History at the Queen's University, Kingston, Ontario, has produced a book that is clearly set out, contains much important material, and is well documented. It must be admitted that it is not altogether an easy book to read, except perhaps to the economist, and this state of affairs is accentuated by the lack of a central theme. Mr. Graham examines the relations between Great Britain and the British North American Provinces in a series of chapters which, like parallel lines, threaten to produce themselves to infinity, but which are ultimately brought together and summarised in a final chapter. Such treatment is probably inseparable from the subject, but it is no easy task for the reader to keep in his head the voluminous information on Fisheries, Wheat, Rum, Timber, etc., which Mr. Graham offers, until the final resolving chord, as it were, is struck.

As indicated above, Mr. Graham's book is of more interest to the economic than to the naval historian, but that is not to say that it lacks material of interest to the latter. Most of all he will be struck by the extent to which the old Navigation System was maintained by its supporters as an essential bulwark of the naval institutions of Great Britain. That this was an important aspect is of course well known, but it would appear from Mr. Graham that it was by far the *most* important, and the reluctance to give it up due far more to an enlightened interest in the national preservation than to stupid conservatism or selfish vested interests. This, in an age which has permitted the country's merchant shipping to fall catastrophically in tonnage in deference to individual interests, and in which essential war-like operations are constantly hampered and restricted by shortage of shipping, is a bit of an eye-opener, and should cause us to ask yet again whether imperial responsibility is not more important than maximum profits.

Mr. Graham has some interesting chapters dealing with the first breaches of the Navigation System—so soon to lead to its complete breakdown. It was the freedom of the United States, coupled with the compelling influence of the Revolutionary and Napoleonic Wars, that first produced the change. The British North American Colonies depended on the United States for supplies, and once the door was opened they resisted all attempts to shut it firmly once again. The doctrine of "real necessity," in which condition American supplies were to be admitted not only to the British North American Colonies but to the West Indies, was liberally interpreted by those on the spot, and concessions once granted were difficult to withdraw. Thus when the influence of "big business" was added the whole system collapsed. Its disappearance was not such an unmixed blessing as is generally supposed.

AIR

The Royal Air Force in the World War: Volume I. By Captain Norman Macmillan. (G. G. Harrap & Co., Ltd.) 10s. 6d.

Captain Macmillan is performing a useful service in writing the history, of which this is the first instalment, of the operations of the Royal Air Force in the present war. Here he covers the period of preparation for the war which ultimately broke out in the autumn of 1939, and also the phase of hostilities which was known in the United States as the "phoney war" and which came to an end in the spring of 1940. He begins by devoting four chapters to the pre-war events in which the Royal Air Force was concerned. Chapter V describes the last peacetime air exercises and the coming of war. Chapters VI, VII and VIII record the operations of the Bomber, Fighter and Coastal Commands, respectively, during the first winter of the war. Short sketches of the careers of the distinguished officers who were then in command of these divisions—Sir Edgar Ludlow-Hewitt and his successor, Sir Charles Portal, Sir Hugh Dowding and Sir Frederick Bowhill—are given. Two appendices end the book: one quotes President Roosevelt's appeal to the belligerents to refrain from bombing civilians, the other tabulates a number of particulars of the various types of aircraft in use in the Royal Air Force (and the Fleet Air Arm) and the *Luftwaffe*. The book has a number of good illustrations.

We began the war with an Air Force of superb quality but woefully deficient in numbers. We paid for that numerical inferiority in the Norwegian campaign. "In Norway," says Captain Macmillan, "the Allies first felt the effect of superior air power. It was that factor, more than any, which made inevitable the evacuation from a country where there was little room for manoeuvre and where air bases were almost impossible to improvise It was seldom that the Royal Air Force could muster more than a hundred aircraft all told for counteraction to the thousand which the Germans employed in Norway. All the brilliant courage of the pilots and crews of the Royal Air Force could not overcome the tremendous handicap imposed upon their Service by a generation whose supine folly was a vain hope of preserving peace without adequate arms in a fast re-arming world."

That handicap was to be felt again and again in the subsequent operations of the Royal Air Force: in Greece, in Crete and in Malaya. Who knows whether the results of its impact on our fortunes in the war are even yet complete? Perhaps by the time when Captain Macmillan comes to pen his concluding volume he will have a more favourable tale to tell on this particular point and that he will be able to show that it is the enemy and not we who are battling against superior numbers. The British Commonwealth of Nations is at present engaged in building a colossal structure of air power. If quality and performance are maintained we should end this war, as we ended that of 1914-18, the strongest Power in the air. It must be our task thereafter not to throw away our advantage by repeating the experiments in altruistic internationalism in which we were so foolish as to indulge in the last inter-war period.

Men of the R.A.F. By Sir William Rothenstein and Lord David Cecil. (Oxford University Press.) 12s. 6d.

This book includes a pleasant account of Sir William Rothenstein's impressions of life in the R.A.F., together with forty reproductions of fine portrait drawings of different airmen made by Sir William in the course of many visits to R.A.F. stations all over England. A shorter essay, "A Layman's Glimpse," is contributed by Lord David Cecil.

ADDITIONS TO THE LIBRARY

GENERAL

- RUSSIA FIGHTS ON. By Maurice Hindus. 8vo. (Collins.) 8s. 6d.
 MEN AND POLITICS. By Louis Fischer. 8vo. (Jonathan Cape.) 18s.
 WAVELL IN THE MIDDLE EAST. By Major-General H. ROWAN-ROBINSON. 8vo. (Hutchinson & Co.) 12s. 6d.
 HOW STRONG IS AMERICA? By Noel Barber. 8vo. (George G. Harrap & Co.) 6s. Presented.
 THE FIGHT FOR GALLIPOLI. By Admiral of the Fleet, Sir Roger Keyes, Bt. 8vo. (Eyre & Spottiswoode.) 12s. 6d. Presented.
 HOW STRONG IS JAPAN? By N. Barber. 8vo. (George G. Harrap & Co.) 6s. Presented.
 FOUNDATIONS OF ASTRONOMY. By W. M. Smart. 8vo. (Longmans, Green & Co.) 16s. Presented.
 THE WAR: THE FIRST YEAR. By E. McInnis. 8vo. (Oxford University Press.) \$1.50. Presented.
 JOSEF STALIN. By D. M. Cole. 8vo. (Rich & Cowan, Ltd.) 6s. Presented.
 WHEN BRITAIN SAVED EUROPE. By C. Petrie. 8vo. (Eyre & Spottiswoode.) 12s. 6d.
 NO OTHER ROAD TO FREEDOM. By Leland Stowe. 8vo. (Faber & Faber.) 12s. 6d. Presented.
 THE WAR: SECOND YEAR. By Edgar McInnis. 8vo. (Oxford University Press.) \$1.50. Presented.
 BERLIN DIARY. By W. L. Shirer. 8vo. (Hamish Hamilton.) 12s. 6d.
 JAPAN UNMASKED. By Hallett Abend. 8vo. (The Bodley Head.) 12s. 6d.

NAVY

- SEA POWER IN THE MACHINE AGE. By B. Brodie. 8vo. (Oxford University Press.) \$3.75. Presented.
 ARK ROYAL—THE STORY OF A FAMOUS SHIP. By Sir H. Russell and Commander H. Pursey, R.N. 8vo. (John Lane, The Bodley Head.) 4s. 6d.

MILITARY

- FROM WELLINGTON TO WAVELL. By Sir George Arthur. 8vo. (Hutchinson & Co.) 12s. 6d.
 THE SOVIET-FINNISH CAMPAIGN, 1939-1940: MILITARY AND POLITICAL. By W. P. and Z. Coates. 8vo. (Eldon Press, Ltd.) 6s.
 THE DEFENCE OF VILLAGES AND SMALL TOWNS. By Colonel G. A. Wade. Pamphlet. (Gale & Polden.) 1s. 6d.
 A HISTORY OF THE UNIFORMS OF THE BRITISH ARMY. FROM THE BEGINNINGS TO 1760. Vol. 2. By C. C. P. Lawson. 8vo. (Peter Davies.) 17s. 6d. Presented.
 A SOLDIER DARES TO THINK. By J. B. White. 8vo. (Vacher & Son, Ltd.) 2s. 6d. Presented.
 REGIMENTAL BADGES AND SERVICE CAPS. Compiled. (G. Philip & Son.) 1s.
 BLITZKRIEG. By F. O. Miksche. 8vo. (Faber & Faber, Ltd.) 12s. 6d.
 SIR LUMLEY GRAHAM'S JOURNAL CRIMEAN WAR. Typescript. 2 vols. Presented by Lumley White, Esq., and Miss E. C. White.

AIR

- THE ROYAL AIR FORCE IN THE WORLD WAR, 1919-1940. Vol. I. By N. Macmillan. 8vo. (George G. Harrap & Co., Ltd.) 10s. 6d. Presented.
 MEN OF THE R.A.F. By Sir W. Rothenstein and Lord D. Cecil. 8vo. (Oxford University Press.) 12s. 6d. Presented.

111th ANNIVERSARY MEETING

ON TUESDAY, 3RD MARCH, 1942, AT 3 P.M.

GENERAL SIR HARRY H. S. KNOX, K.C.B., D.S.O.

(Chairman of the Council), presiding.

THE SECRETARY read the notice convening the meeting, which had been published in *The Times*.

THE CHAIRMAN'S ADDRESS

It is my duty to propose:—

"That the Report and Accounts, as circulated, be taken as read and adopted."

Before making any remarks on the resolution, I would remind you that at this our 111th Anniversary Meeting we meet under the shadow of a great loss, the death of our President, the Duke of Connaught. It is of interest to remember that during the past seventy years we have had only two royal Presidents, H.R.H. the Duke of Cambridge and H.R.H. the Duke of Connaught. I feel sure that your Council was interpreting the wish of all the members when I addressed the following letter to Lady Patricia Ramsay:—

"MADAM,

"On behalf of the Council and Members of the Royal United Service Institution, I beg to tender our deepest sympathy on the death of your illustrious father, His Royal Highness the Duke of Connaught.

"The Institution has been profoundly indebted to him for his never-failing interest in its welfare and activities since he became its President in 1904.

"We recall with gratitude the special honour he paid us by attending our Centenary Celebration in 1931, and the efforts he made in quite recent years to ensure that we should continue to enjoy the high privilege of the use of the Banqueting House, conferred on the Institution by Her Majesty, Queen Victoria.

"I have the honour to be, Madam,

"Your Ladyship's most obedient servant,

"HARRY H. S. KNOX (General)."

I received, in answer to that letter, the following letter from Colonel Price Davies:—

"Clarence House,

"DEAR GENERAL,

"St. James's, S.W.

"I am desired by Lady Patricia Ramsay to ask you to convey to the Council and Members of the Royal United Service Institution her warmest thanks for their kind expression of sympathy on the death of her beloved father.

"She much appreciated their kind reference to the work His Royal Highness had done in the past for the Institution, and it is a great comfort to her to know that her father is mourned by so many people."

There is a memorial notice in the current number of the JOURNAL, but perhaps you will forgive me if I add a personal recollection. His Royal Highness was first and foremost a first-class regimental officer. Because of his consideration for others and his keen interest in their welfare he was beloved in the Army. I remember in the year 1902 he came to India to represent the King at the Delhi Durbar, and my regiment had the honour of providing the guards in the Royal Camp. At the entrance to H.R.H.'s camp there was a large square

tent, with a stove in the middle of it, and one of our double-sentry posts was at the door of that tent. When the officer on guard went round one very cold night (the winter nights are very cold in Delhi) he found the sentries absent from their post at the entrance to the Duke's camp. He was rather perturbed and began to search for them. He happened to look through the door of the tent and he saw them inside, one on each side of the stove. He asked them why they were there, and they told him that the Duke had come out and had himself posted them inside the tent, telling them to report to their officer that he had done so. It was by acts of this sort that he endeared himself to the British Army.

We also have to record with much regret the loss of a member of the Council who for many years worthily represented the Royal Naval Reserve. Captain Sir David Wilson-Barker took his full share in the Council's activities and was a very regular and helpful attendant at the meetings of the Finance and Museum Committees.

The Report does not require much comment from me. It is short and we intentionally made it short. But there is one point that I mentioned last year and which I should like again to stress. You will note that during the year a hundred new members have joined the Institution, but there is a net decrease in the membership of 273, of whom 74 died on active service. It is natural that in war time we should have some slight reduction in membership: there must be some who fall out for financial and other reasons. At the same time, there are many officers who during the War have risen to senior positions who are not members of this Institution, and I would ask them to consider whether, as they progress in seniority, it is not their duty to support an Institution such as this. We hear a great deal about co-operation between the Services. In this Institution we have the personification of Service co-operation. In what better way can you support the co-operation of the Services than by being a member of the Royal United Service Institution? I would therefore ask the senior officers to consider whether they should not, as a matter of course, be members of this Institution. In saying this I am not throwing stones in a glasshouse, as I have myself subscribed to the Institution for fifty years. In addition to the senior officers to whom I have referred, there are, of course, junior officers who I am sure would benefit by joining the Institution; many of them have done so, and I hope that they all will.

The next section in the Report deals with finance, and that subject will be much better dealt with by the Chairman of our Finance Committee, Colonel Abel Smith, than by me.

I again have to congratulate the Chairman of the Journal Committee on the continued success of the JOURNAL and its new record in circulation and advertisements. I think we have been particularly fortunate in obtaining the services of Colonel Talbot as Assistant Editor.

I am sure you will be glad to hear that the Library has had a successful year and that the Librarian reports that, instead of a reduction in the use of the Library, there has been an increase and more books than before have been taken out, so the removal of the library to a place of safety has not been a disadvantage in that respect.

The small Exhibition in the theatre of the Institution has been a great success. You will see in the Report the number of people who have visited it during the year. I think that Sir William Goodenough and Captain Parker,

our Curator, deserve our gratitude for having started and maintained that Exhibition.

There are two items not mentioned in the Report which are of general interest. One is that the beautiful ceiling in the Banqueting Hall has been removed to a place of safety, and the other is that we have started Lectures again. Everyone realises how difficult it is to secure either lecturers or audiences in war time. We are therefore all the more grateful to those lecturers who have come forward, and I hope they realise that the rather empty room does not mean that their lectures are not appreciated, because they are published in the JOURNAL and will be of value to many people.

There is only one other remark that I wish to make before calling on Colonel Abel Smith. The Institution has got through another year of war successfully, and I think that our thanks are due to our Secretary and to all the members of the staff of the Institution who have carried on so gallantly under difficult conditions.

I will now ask Colonel Abel Smith to second the resolution.

COLONEL ABEL SMITH: I have pleasure in seconding the resolution. I regret that there is a small deficit for the year 1941; the reason for it is clearly explained in the Report, and I do not think I need enlarge upon it. You must remember that in the previous year we brought forward a profit of £1,100, so the deficit of £200 in the year under review, which was caused by the removal of the Library, need not create any anxiety at all about the financial position of the Institution.

THE CHAIRMAN: Has anyone any remarks to make or questions to ask with regard to finance, the JOURNAL, the Library or any other subject dealt with in the Report?

As there are no remarks or questions, I will now put the resolution to the meeting.

The resolution was put to the meeting and carried unanimously.

RE-ELECTION OF AUDITORS

COMMANDER W. B. ROWBOTHAM, R.N.: I beg to propose:—

“That Messrs. Barton, Mayhew & Company be re-elected Auditors for the ensuing year at a fee of fifty guineas.”

MR. G. BRENAN: I beg to second the resolution.

The resolution was put to the meeting and carried unanimously.

LADY MEMBERS

THE CHAIRMAN: I now have to propose:—

“That the following additional paragraph, which has been duly posted in the Reading Room, be added to Bye-Law, Chapter II, ‘Membership,’ on page 13:—

‘1 (a). Ladies whose names appear or have appeared in the Official Lists as serving or having served as officers with any of the three Services.’”

The purpose of this resolution is to admit ladies who are officers in the Women's Services to full membership and privileges of the Royal United Service Institution. It seems to the Council that this is only a fitting recognition of the great part which those Services are playing in the war effort of this country.

LIEUT.-GENERAL SIR W. D. S. BROWNRIGG, K.C.B., D.S.O. : I beg to second the resolution, and in doing so I should like to read to you the present wording of the Bye-Law as to membership, which is as follows: "Commissioned Officers of *all* H.M. Fighting Services, including those of the Dominions, Colonies, India, etc." It therefore seems that technically the qualification for membership is being a Commissioned Officer, without regard to sex, although I fully admit that the question of sex did not enter into the minds of those who framed our Bye-Laws in those days. I consider, therefore, that the passing of this resolution will be in the nature of acknowledging a right, and not to pass it would be discriminating against a body of officers who are now doing as much as any male officers in any of the Services to win the war.

To come down to a rather baser level, the Chairman has told us that there is a decrease in the number of our members, and I suggest that possibly the passing of this resolution will bring us a large number of new members.

ADMIRAL OF THE FLEET LORD CHATFIELD, P.C., G.C.B., O.M., K.C.M.G. : I should like to say that I wholeheartedly endorse this resolution. I think it will do good in many ways. It will show our respect for this large body of ladies who help the Services, and it will enable us to fill up our ranks in this Institution. I think it will be a great compliment to the Institution if the officers of the women's Services join us in considerable numbers. I am sure the resolution will be looked upon as a broadminded step by this Institution in leading the men's Services to a proper recognition of what we owe to the women's Services.

AIR MARSHAL SIR L. GOSSAGE, C.B., C.V.O., D.S.O. : I also should like to speak very strongly in favour of this resolution. As an officer of the Royal Air Force, I may say that at the present moment we are assigning to our lady officers posts of responsibility and very considerable importance, and it is only right, therefore, that they should be afforded the privileges of this Institution.

The resolution was put to the meeting and carried unanimously, and with acclamation.

PRISONERS OF WAR

COLONEL J. JOSSELYN, C.M.G., D.S.O., O.B.E., T.D. : The resolution which I have to propose does not need any explanation or commendation by me, and I will therefore move formally :—

"That the following amendment, which has been duly posted in the Reading Room, to Bye-Law, Chapter II, paragraph 8, and to Temporary Bye-Law, passed at Annual General Meeting, 3rd March, 1936, be adopted :—

'A Member who is a Prisoner of War shall be allowed to suspend payment of his subscription or allow it to lapse without detriment to his resuming full membership when he is able to do so.'

LIEUT.-COLONEL J. H. WHALLEY-KELLY : I should like to second that resolution.

The resolution was put to the meeting and carried unanimously.

COUNCIL

THE CHAIRMAN : The next question with which we have to deal is the vacancies on the Council.

There is one vacancy for the Royal Navy, and Admiral the Hon. Sir R. A. R. Plunkett-Erle-Drax, K.C.B., D.S.O., has been nominated to fill the vacancy.

The nomination was approved.

THE CHAIRMAN : For the Regular Army there are two vacancies, and the following officers have been nominated to fill them :—

General Sir Walter M. St. G. Kirke, G.C.B., C.M.G., D.S.O., and
Lieut.-General Sir B. N. Sergison-Brooke, K.C.V.O., C.B., C.M.G.,
D.S.O.

The nominations were approved.

THE CHAIRMAN : There is one vacancy for the Territorial Army, and Colonel J. Josselyn, C.M.G., D.S.O., O.B.E., T.D., has been nominated for it.

The nomination was approved.

THE CHAIRMAN : There is one vacancy for the Royal Air Force, for which Marshal of the Royal Air Force Sir Edward Ellington, G.C.B., C.M.G., has been nominated.

The nomination was approved.

TRENCH GASCOIGNE AWARDS

THE CHAIRMAN : The next item on the agenda is to report the result of the Trench Gascoigne Prize Essay Competition, 1941, and to present the prizes.

THE SECRETARY : The subject of the Essay was : " The War has demonstrated the remarkable effectiveness and versatility of air power in support of naval and military operations and also against the enemy's industries. What can be learnt from this in respect of the future organization of the three fighting Services ? "

The awards by the Referees representing the three Services, which were approved by the Council, were as follows :—

The First Prize of Thirty Guineas to Lieut.-Colonel J. H. Whalley-Kelly, of the South Lancashire Regiment.

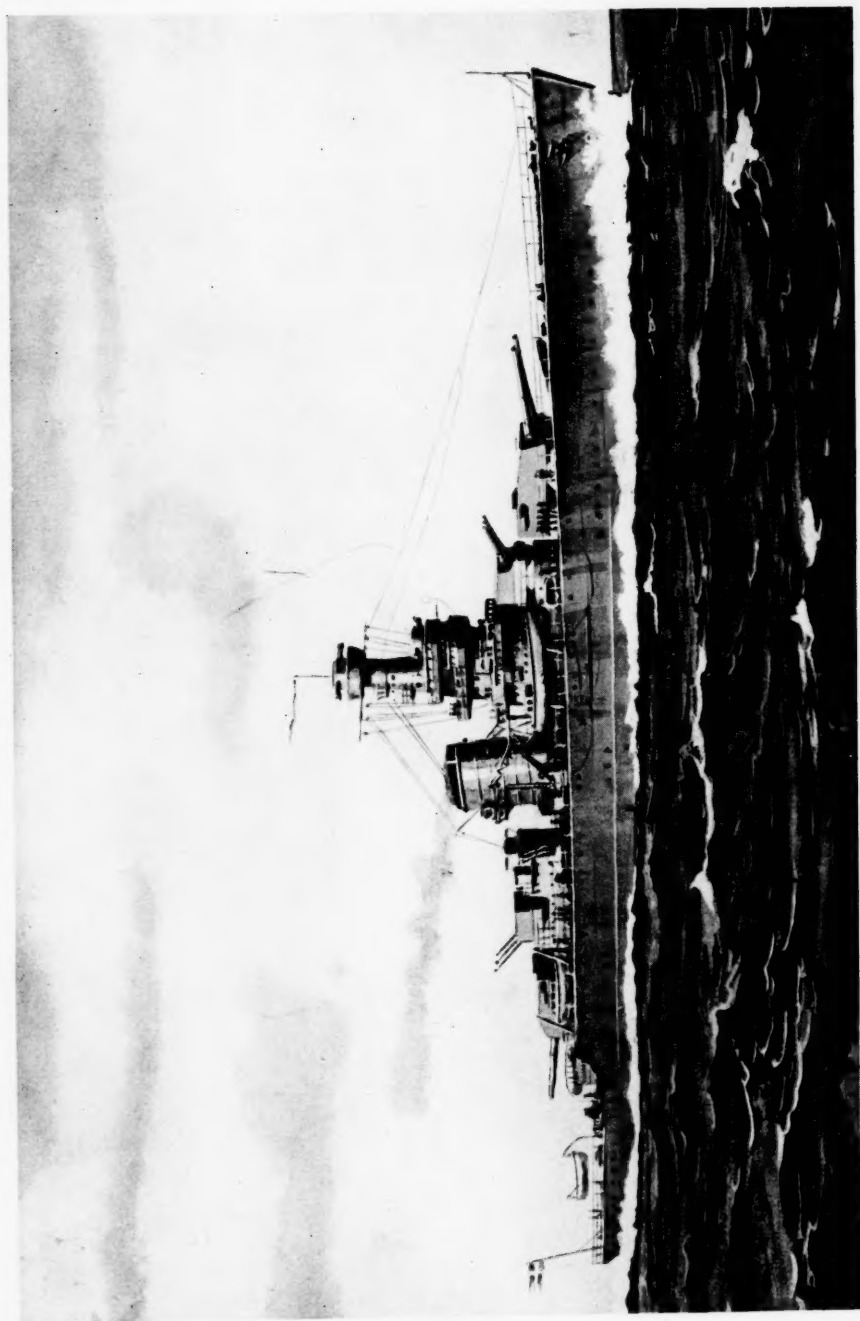
THE CHAIRMAN presented the prize to Lieut.-Colonel J. H. Whalley-Kelly and congratulated him on his success.

THE SECRETARY : The Second Prize of Twenty Guineas has been awarded to Captain W. B. R. Neave-Hill, of the East Yorkshire Regiment, who regrets he is unable to be here this afternoon.

VOTE OF THANKS TO THE CHAIRMAN

MARSHAL OF THE ROYAL AIR FORCE SIR EDWARD ELLINGTON, G.C.B., C.M.G. : I am sure that I am expressing the feelings of the Institution in proposing a vote of thanks to Sir Harry Knox for his services as Chairman of the Council. We are especially grateful to him because he has occupied this position for two years, and those two years have been very difficult ones for the Institution. London has been blitzed, and Sir Harry Knox is one of the few Members of the Council who have been living in London and available to help the Secretary and the other members of the staff when required. I have great pleasure in proposing a vote of thanks to Sir Harry Knox.

The motion was carried with acclamation, and the Meeting then terminated.



From an official sketch in the "Sveriges Flotta"

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A COAST ATTACK SHIP DESIGNED FOR A NEUTRAL POWER

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